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THE NEW YORK
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FOR JULY, 1858.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*An Account of some Cases in Surgical Practice, by* C. E. ISAACS, M.D., Consulting Surgeon to Kings County and Blackwell's Island Hospitals, etc., etc.

1. *Case of an anomalous sac or pouch, connected with the membranous portion of the urethra.*—This case occurred in the practice of Drs. Otto Rotton and Rice, to whom I am indebted for the opportunity of making the post mortem, and of giving an account of the case, and of the very remarkable accompanying specimen. The patient was a native of Scotland, 85 years of age, of whose medical history little was known; it was, however, ascertained that he had had much difficulty in passing his water for many years. When Drs. Rotton and Rice were first called to him, he complained of inability of making water, and had also some obscure symptoms of peritonitis. All attempts to pass the catheter were unavailing, and another excellent surgeon, who was now sent for, was also unsuccessful. On examination per rectum, it was ascertained that there was very little urine in the bladder. The symptoms rapidly increased in severity, notwithstanding the most judicious treatment, and the patient died in about sixty hours from the commencement of the attack. I did not see the patient until after death. On making the post mortem, with the assistance of Drs. J. M. Minor, Rotton, and Rice, I found the peritonæal surface of the small intestines much inflamed, and covered at various points with coagulated lymph and pus—a knuckle of small intestine, which had fallen down into the cul de sac, between the bladder and rectum, was more intensely

inflamed than any other part. The bladder contained but a few ounces of urine; its coats were much thickened. The prostate was considerably enlarged. The canal of the urethra was unusually small, and so much contracted in several places, as only to admit with difficulty, the passage of the smallest bougie. But the point of greatest interest was discovered in the membranous portion of the urethra, the inferior wall of which was deficient. Thus an opening was formed, about the size of a shilling, which in fact was the mouth of a sac or pouch, which was ascertained by actual experiment to be capable of containing upwards of an ounce of fluid. This pouch extended underneath the prostate, and backwards and upwards, until the superior edge of the posterior wall of this sac was considerably above the line of reflection of the peritonæum from the bladder on to the rectum. This cavity was lined throughout by mucous membrane, which was examined by the microscope, and found to be covered by epithelial cells, similar to those of the bladder and urethra. In the posterior wall of the sac, a rounded opening about the size of a three cent piece, was discovered extending through into the peritonæal cavity. The edges of this hole were in a gangrenous condition, and through it the urine had found its way into the recto-vesical cul de sac of peritonæum, and had produced an intense and fatal local peritonitis. There can be little doubt, that the mucous pouch had been of many years standing, and that it usually contained more or less urine; as to the manner in which this pouch was formed (if not congenital, which seems to be improbable), may we not reasonably conclude, that it originated in a false passage, made by attempts to introduce instruments, and that this passage became gradually lined by a prolongation of mucous membrane? The urine as it issued from the bladder, being prevented from freely passing forwards by the strictured state of the urethra, would thus tend to pass backwards, and slowly dilate the sac, in proportion to the force of contraction of the bladder upon its contents. At length, after many years, the pouch had become so much enlarged, as to approximate too closely to the peritonæum, when inflammation took place, at the point of greatest contiguity. This was speedily followed by local gangrene, perforation and entrance of urine into the peritonæal cavity, with consequent peritonitis and death.

The greater difficulty, and indeed impossibility, of passing a catheter, in this case, is now sufficiently evident, for with all the care and caution in keeping the point of the instrument along the upper wall of the urethra, it would be almost, or quite certain, to stray from its true course and enter the pouch, instead of the cavity of the bladder. Having never met with a case similar to the one just described, and believing it to be very rare, I have deemed it of sufficient interest to be recorded.

2. *Case of ligature of the common carotid artery, in the lower half of its course.*—M. H., a large muscular man, 38 years of age, was admitted into Kings County Hospital, with an encephaloid tumor, of twelve months' standing, involving the deep seated cervical glands, in the upper part of the anterior region of the neck, and also the integuments which were indurated, and of a very dark red color. The pain was very severe and almost constant, from the rapidily increasing growth and consequent distension of the parts. As extirpation was impracticable, I proposed to him, merely as a means of temporary relief, the ligature of the common carotid. He promised to consider it, and in one week afterwards I received word that he had consented to the operation. I may here state that there were present, on this occasion, Dr. Turner, Resident Physician; Drs. J. M. Minor, Hutchinson, Langdon, Drake, Cochran, Brooks, and many other physicians. On examining the patient, I found, to my great surprise, that the tumor had increased to nearly twice its previous size; that it had involved the glands and other structures, even lower down than the middle of the neck, that it encroached upon and overhung the lower third of this region, and that the integuments here had become exceedingly vascular, so that the difficulties of ligaturing the carotid had become immensely increased. So great was the derangment of parts, that I found it very difficult to discover the inner edge of the sterno mastoid. Having, however, determined this point, I made an incision, just above the upper border of the sternum, and extended it about two inches upwards, along the edge of this muscle. The hemorrhage from the skin, which alone was divided, was very profuse. The subcutaneous fat, platysma and superficial fascia, were all matted up together. Every touch of the knife, in passing through these structures, was attended by very great hemorrhage. In passing downwards also towards the deeply seated vessels, the greatest caution was found to be necessary, inasmuch as any separation of the parts, even by the handle of the scalpel, or by the fingers, was followed by a most profuse hemorrhage. However, by the use of ice, temporary pressure, and patient waiting from time to time, I at length arrived at the sheath of the carotid, and then waited a few minutes, until all the bleeding had ceased. The carotid could now be felt pulsating at the bottom of a narrow cavity, and nearly three inches in depth, from the surface. The sheath was now cautiously

opened, and the ligature passed under the artery without the least difficulty, by means of Mott's aneurism needle. The artery was then tied, at a point an inch and a half above the superior margin of the clavicle. No unpleasant symptoms followed the operation. The ligature came away on the sixteenth day, and the wound healed up without any difficulty. The result of the operation, was to diminish the pain, and to check the growth of the tumor, for about ten days only. After this period, it began to increase with the accession of pain, and has since pursued its course, as before the operation. In similar cases, the ligature of the carotid has often, perhaps, usually relieved the patient for a much longer time than in the present instance. In such a hopeless disease as cancer, we are often glad to avail ourselves of any chance of relief, even if this promises to be only for a short period. I have recorded the above case, as it seemed to me, that some of the facts herein related might be useful, and also because it often happens that more is to be learnt from our unsuccessful cases, than from those which are attended with a fortunate result.

3. *Removal of an encephaloid tumor of the vagina.*—For the opportunity of treating the following case I am indebted to Dr. J. Marion Sims, who very kindly referred the patient to me, he being unable to attend to her, at that time, as he was obliged to be absent from the city for several days. Mrs. S., aged 60, residing in Williamsburgh, the mother of several children, had been conscious of the presence of a tumor in the vagina, for the last six months. This had not occasioned any pain, but much annoyance, and a constant muco-purulent discharge, etc. On the 28th of April, with the assistance of Dr. Colt, her family physician, she was placed under the influence of chloroform. I found then a tumor occupying the inferior two-thirds of the vagina, attached to the lower wall of that canal, and closely in contact with the upper wall of the rectum. I drew down the tumor to some extent, made an incision around it, and through the mucous membrane, and then enucleated it, without much difficulty, taking care not to injure the rectum. The tumor, when removed, was found to consist of spherical masses, connected together, so as to resemble a bunch of grapes. From its appearance, when incised, and also under the microscope, where it was seen to be composed of nucleated cells of various sizes and forms, it was believed to be encephaloid cancer. About a fortnight after the operation, I visited the patient, and found that portion of the vagina, from which the tumor had been taken, entirely healed, but that a small tumor, about the size of a half ounce leaden ball, had appeared, just within the orifice of the vagina. This I immediately

removed, and found it to be of the same character with the other tumors. I have just seen the patient. The parts have entirely healed, and there is no sign of any reappearance of the disease, yet the probability is evidently in favor of its return. The patient has at present a tumor in the groin, as large as a small orange, painless, and causing very little annoyance. She is unwilling to have it extirpated. It is also, probably, of an encephaloid character. It is believed, that the variety of tumors of the vagina, similar to those which have been described, and especially as unconnected with the uterus, will sufficiently justify the publication of this case.

4. *Cancer of the caruncula lachrymalis* (*encanthis*).—On the 8th of May, I was requested by Dr. J. H. Rhodes to visit with him a boy aged 13 years, and who had had a tumor in the internal angle of the eye for the last nine months. It had appeared without any evident cause, was painless in itself; but there was considerable circumorbital pain, and lately had begun to interfere seriously with vision. The tumor evidently consisted of two lobes, one attached to the inferior and the other to the superior eyelid. It was of a dark red or almost purple color. Immediate extirpation was recommended, and performed at my first visit. The boy having been placed under chloroform, I made an incision, commencing at the external commissure of the eyelids, and extending outwards about half an inch. This allowed the eyelids to be strongly everted.

I then dissected the inferior lobe of the tumor from its attachment to the eyelid, and removed it entirely. The superior lobe was then carefully detached from the upper eyelid. It was found to pass inwards, for about three quarters of an inch, and was easily separated from the periosteum covering the os unguis, and the inner wall of the orbit. Every vestige of it was carefully removed, as far as could be ascertained. Great care was taken not to injure the globe of the eye, or the muscles or nerves, so far as these could be avoided. It is now twenty-three days since the operation. The patient has perfect vision, and complete control over all the movements of the eye. It is, however, much to be feared that the disease will return, inasmuch as the tumor consisted of cells, which were undoubtedly cancerous.

5. *Case of removal of a tumor from the calf of the leg, which had caused neuralgia for sixteen years—Recovery.*—Mrs. ———, a lady aged 50, of nervous temperament, and the mother of several children, consulted me on the 8th of April last, on account of a neuralgia of the calf of the leg, which had existed for 16 years. It had originated without any evident cause, and had resisted all the various general and local remedies

which had been applied by different practitioners. On examination of the limb, I could not discover any distinct tumor, although there was an obscure and ill-defined *lumpy* feel of the part. The most gentle handling of it, always excited severe pain, which usually continued for three or four days, with more or less severity. I prescribed such general and local remedies as were calculated to soothe and diminish the irritability of the nervous system, and to reduce the sensibility of the affected part. These were continued for about a fortnight, without the least benefit.

After making then as thorough an examination of the part as practicable, I came to the conclusion that there were probably tumors formed upon, or among the fibres of some of the nerves of the limb, perhaps similar to those upon amputated stumps, or least some diseased condition of the nerves, which might be discovered by the knife; and proposed to the patient, that she might allow me to make an incision into the leg, in order to ascertain the precise condition of the parts affected, and then to do whatever might be necessary under the circumstances of the case.

She readily assented, and accordingly on the 24th of April, assisted by Dr. J. M. Minor, and Drs. Dunn and Mulhallon, I performed the following operation—the patient having been rendered perfectly insensible by the administration of sulphuric ether.

Two curvilinear incisions were made in the centre of the calf of the leg, so as to include an elliptical portion of the integuments, about 3 inches long, and 1½ broad. This being removed, was carefully examined, but nothing abnormal could be detected either in the skin, the subcutaneous fat, and cellular tissue, or the fascia. The expanded and glistening tendon of the gastrocnemius muscle, was now fully exposed. It appeared to be more convex than usual, and an indistinct sensation of some foreign body could now be felt underneath it. This tendon was then split down its centre, for about four inches, when a dark colored and exceedingly vascular tumor came into view. This was subsequently found to occupy the entire thickness of the soleus muscle. Posteriorly it was in close contact with the posterior tibial vessels and nerve, and was separated from them with considerable difficulty. The tumor, when removed, was found to be about the size of the longitudinal half of a hen's egg, and was composed of a mass of veins (resembling a bundle of earthworms, as is often seen in cases of varicocele), and of the degenerated substance of the soleus muscle. Seattered through its substance were six rounded stony or calcareous concretions, some of them of the size of a half ounce leaden ball, and others of that of small peas. They were exceedingly hard, and each one was inclosed in a serous cyst. They were probably composed of the phosphate and carbonate of lime; one of them, which was not so hard as the others, contained a small quantity of hair, in its centre. The patient has recently informed me, that she first felt the neuralgic pain in her leg, three days after the birth of her child, which is now 16 years old.

Is it not probable, that, at the time of birth, the head of the child might have pressed upon the veins in the pelvis, in such manner as to cause congestion of the inferior extremity, and dilatation of the veins in the substance of the soleus muscle; and that, subsequently, the stony concretions were formed among these dilated vessels?

It seems reasonable to suppose, that these stony concretions were in contact with nervous filaments, and were made to press upon, and irritate them, during each contraction of the muscles of the leg; inasmuch as every step in walking was attended with excruciating pain. Since the operation, the neuralgic pains, which had so long tormented the patient, have entirely disappeared, and the wound is at present almost healed.

Art. II.—*Simple Tests for some important Medicinal Preparations.* By Edward R. Squibb, M.D.

There is no branch of commerce wherein the competition of trade is more rapidly and more certainly tending to deteriorate and debase the quality of manufactured products than that which deals in medicinal substances; and there is none where the interests of the consumer are more remotely considered in manufacturing, or where these interests are so difficult to guard and protect; whilst there is assuredly no branch whose operations and productions are of more vital importance to the community and the profession of medicine.

An important collateral effect of this debasement of medicinal substances, which does not receive due consideration in the profession generally, is that the effects of the uncertainty and bad quality of these substances are transmitted directly to the practice of medicine, and in failing to fulfill the indications to their use, they not only bring distrust and discredit upon both the science and art of medicine, but also tend directly to foster and uphold the quackeries and nostrums of the day, in many ways. For instance, a physician prescribes the compound cathartic pills of the pharmacopœia. They either act drastically, inadequately, or they do not act at all. The patient says the doctor does not understand his business, and the next time buys "Brandreth's Pills" or some other nostrum, and is better satisfied with the result. The circumstance that the compound cathartic pills were made from bad and deficient materials, and through competition in trade were unduly active from the addition of some cheap drastic, or inert from consisting mainly of starch and gum, whilst the extracts from which the nostrum was made had been much more carefully prepared—is quite overlooked by both practitioner and patient to the lasting injury of the interests of both. It is, however, a fact that a large proportion of the compound extract of colocynth sold, is manufactured from materials so cheap and so bad that it is rarely quoted in prices current at much above half the price of the crude materials from which it should be made; while the writer has known of several hundred pounds having been made and sold within one year at a price below one third of that which the good materials directed by the pharmacopœia would have cost.

Another fertile source of bad and imperfect medicinal substances lies in the use, in manufacturing, of cheap substitutes and by-products, and in utilizing residues for improper purposes, so that through many ways the tendency is constantly increasing whereby the science of medicine is subsidized and radically injured by the debasement of the agents upon which the success of the art of medicine so much depends.

The check or remedy for this evil tendency rests entirely and only with the profession, and may be found in various ways, but in no way more easily or more certainly, for such substances as admit of it, than in the application of simple and reliable tests.

The writer having for some years past been engaged in manufacturing preparations of known character, for the navy, by the United States officinal standard, has had the opportunity of observing their properties pretty closely, and has collated and originated a few simple and easy tests of quality which it is the object of this paper to communicate to the profession. These tests require little time, skill, or apparatus, and are adapted to the extemporaneous use of the physician or apothecary, so that they may be conveniently applied at the dispensary counter or upon the office table. They consequently do not aim at critical accuracy, but at the more important point of practical discrimination.

A very important general indication of quality in medicinal substances is the source from whence they come, and the channels through which they may have passed. The profession should obtain a better and more critical knowledge of the various manufactures, that due weight might be given to the names associated with the preparations they use, and should then be more careful to observe that the authenticated label of the manufacturer is affixed. In the common desire to be considered as manufacturers, and from the indisposition to circulate or publish others' cards or names in connection with preparations sold, it is becoming quite rare to find the name of the real manufacturer upon the packages of medicinal preparations. They are commonly sold without evidence of their source, and therefore without any real responsibility upon any one. The traditional or reputed character with which they commonly pass through the various hands to the profession is too often without other foundation than the disposition to buy cheaply and sell at large profit. From the circumstances that few apothecaries manufacture even their more simple preparations, and that there can be no proper responsibility in a verbal character transmitted through several persons, the professions both of medicine and pharmacy should be more careful that their packages are duly authenticated from the desired sources, as general tests or evidences of quality. A very large proportion of medicinal substances must depend mainly upon some such evidences of quality until their therapeutic value is determined in practice, since they are beyond the easy reach of chemistry, and since sensible properties are so often deceptive. Among those which are susceptible of easy practical discrimination by simple means the writer is at present able to offer the following:

Ether.—A strip of unsized paper, or a clean glass rod, dipped into the ether and allowed to dry for a moment or two, will by the odor it gives, afford evidence of the less volatile impurities that it commonly contains. There usually remains a somewhat aromatic slightly-pungent odor, that is not hurtful in the more dilute ether used for common medicinal purposes, but the disagreeable oily odor often found is more objectionable, whilst really good ether should leave no odor whatever. The ether used for inhalation should leave upon the sponge, paper or rod no foreign odor at all.

The strength of ether is less easily ascertained except by a specific gravity instrument. With a little practice, however, with some good specimen for comparison, a very satisfactory estimate may be found by observing the slowness or rapidity with which any given specimen evaporates from the palm of the hand. Ether for inhalation should give off bubbles of vapor rapidly at the temperature of the palm of the hand. A thin test tube, containing the specimen, should be grasped firmly for a minute or two, and then the ether should be stirred at the time of observation. The bubbles arise from the points of contact between the tube and stirrer.

Compound spirit of ether—Hoffman's anodyne.—Two drops of officinal spirit stirred into a pint of water give to the mixture a distinct oily surface, and the peculiar fruity, aromatic odor of the heavy oil of wine free from the odor of ether and alcohol. Sixty drops in the pint renders the water decidedly turbid. While, with four fluid drachms to the pint, a scanty precipitate of. minute oil globules occurs after a few minutes' standing. The fruity, apple-like odor is characteristic of the chief anodyne ingredient, the oil of wine, and is entirely wanting in the ordinary commercial article. Without the oil of wine the preparation is a stimulant antispasmodic. With the oil it is a highly valuable anodyne antispasmodic, particularly adapted to nervous irritation and hysteria. The liquid universally sold as Hoffman's anodyne is a residue of the ether-making process, containing varying proportions of ether and alcohol with a little etherole or light oil of wine, but in no single instance of the many examinations made by the writer, has any true heavy oil of wine been found in it. Heavy oil of wine, from being expensive and somewhat·difficult to make, has finally been entirely omitted from the preparation, and is now hardly to be met with in commerce. While as a consequence, the preparation to which it belongs, from a failure to meet the proper indications to its use, is become a stimulant, and slowly going out of use.

Spirit of nitric ether.—Two or three fluid drachms of good sweet spirit of nitre that is not more than seven or eight months old, and kept in the usual way, contained in an ordinary test tube, and plunged into water that has been previously heated to 164°, will boil pretty actively. While, if freshly made, or not more than two months old, or if well preserved from light and air, no matter what the age, it will boil actively when surrounded with water at a temperature of 156°. From the fact that this among other liquids may be heated far above its boiling point without ebullition, it becomes necessary to drop a few small fragments of broken glass into the test tube with the spirit after the latter has been heated and while still held in the water. Another precaution necessary in the application of this test, is to discriminate between the mere formation of small gas bubbles around the fragments of glass, and a true ebullition. For whilst the former will occur as a fine effervescence, at any temperature above 140° in any spirit of nitre that contains hyponitrous ether at all, true ebullition, in which the vapor bubbles are much larger and in which they reach the surface and form, by their succession, a bead around the edge of the liquid, only occurs at the boiling points named. The preparation should not be quite colorless, but of a pale straw tint, and should effervesce very slightly upon the addition of carbonate of ammonia. When slightly acid, carbonate of ammonia is the best corregent, because the salts formed are therapeutically similar. The officinal preparation is a solution of five per cent. of hyponitrous ether in alcohol. The ether is the medicinal agent, and the alcohol is necessary for its preservation and dilution only, the latter indeed being often contra-indicated, as in some febrile conditions, where the former would be useful. In commerce, however, it is rare to find the proportion of the hyponitrous ether exceed 3 per cent. While in a great majority of cases it is below 2 per cent., and often in a proportion too small to be detected except by the odor. One of the largest manufacturers in the United States makes it of five different qualities to suit the market, and all these below the officinal standard. Another maker (and the two produce a very large proportion of all that is sold in the United States), sells but one kind, and that, though of varying strength, is commonly below 2 per cent. The above test alone will reject all such specimens. It thus happens that the physician who prescribes this preparation in view of its supposed diuretic and diaphoretic effects is disappointed, and obtains instead the, to some degree, opposite effect of so much alcohol. Hence this preparation also is gradually falling into disfavor and disuse. In view of the circumstances mentioned in connection with these preparations, and the like tendency in many others, it is well worth while for the profession to consider how far it is willing to sacrifice its valuable curative agents to the cupidity of manufacturers. For detailed examination of specimens of sweet spirits of nitre, Hoffman's anodyne, etc., etc., see *American Journal of Pharmacy*, vol. xxviii. p. 302 et seq.; vol. xxix. p. 202 et seq.

Chloroform.—When equal volumes of chloroform and colorless concentrated sulphuric acid (the strong commercial oil of vitriol answers very well) are shaken together in a glass stoppered vial there should be no color imparted to either liquid, or but a faint tinge of color, after twelve hours' standing together. Nor should there be any heat developed in the mixture at the time of shaking it first. Any particles of dust, or cork, or other organic matter that may have been in the vial used, or in the chloroform, will, by reaction of the acid, produce a tinge of color in the acid or its separation from the chloroform, corresponding to the quantity of such particles present, and therefore in the application of the test care must be taken to avoid any such particles. Or if the acid be only faintly tinged at the end of twelve hours' contact with the chloroform, it may be attributed to some such collateral accidental cause.

But if at the end of twelve hours, or sooner, the acid becomes yellow, or brown, or any darker color, it should be unhesitatingly rejected. If the mixture of acid and chloroform should become warm on shaking first, an admixture of alcohol would be indicated. One or two fluid drachms of chloroform spontaneously evaporated from a clean surface of glass or porcelain, or from a piece of clean unsized paper, should leave no odor after it. Commercial chloroform generally will turn the acid brown within two or three hours, and will often render it black and tarry looking within two or three days. Whilst with chemically pure chloroform there is absolutely no reaction within many days.

Calomel.—The most common and injurious contamination of calomel is corrosive sublimate, whereby its otherwise mild action is rendered irritant. This impurity is easily detected by shaking a drachm or two of the calomel in a test tube with distilled water, and, when the water shall have become clear, adding a drop or two of liquor ammonia. If corrosive sublimate be present the ammonia will precipitate it and render the water cloudy.

Iodide of mercury—is often irritant and harsh in its action through contamination with biniodide from faulty preparation. The writer has seen its use abandoned upon the ground of idiosyncrasy, when on examination it was easily shown to contain a notable proportion of the irritant harsh red iodide. The red iodide may be easily detected in it by rubbing a little of the suspected iodide in a mortar with strong alcohol, and then allowing it a few moments to dry. The evaporation of the alcohol leaves the red iodide along the pestle marks as a border to the iodide. A minute contamination becomes very easily seen in this way.

Mercury with chalk.—is of late very commonly found to be harsh and irritant in its action, producing or increasing intestinal irritation to such an extent that many practitioners have abandoned its use, while others are puzzled by its effects.

This also is a result of faulty preparation, wherein through time and labor-saving expedients, or bad appliances, a portion of the mercury becomes oxidized instead of being simply comminuted or divided. However well prepared, it almost always contains a very small proportion of suboxide, but this being one of the mild preparations of mercury, never produces the bad effects alluded to. To detect the peroxide, or irritating property, a drachm or two of the mixture is treated with an excess of acetic acid, and the solution filtered off clear. A few drops of hydrochloric acid is then added to the clear solution. If the preparation be good, this will produce only a slight precipitation of insoluble subchloride from the small quantity of acetate of suboxide formed. If the preparation be old, or badly kept, having had free access of light and air, a pretty copious precipitate will be formed by the hydrochloric acid. The clear solution is again filtered or decanted off this precipitate, and liquor ammonia added to it. If the preparation was contaminated with any peroxide it will now be precipitated by the ammonia as white precipitate. See *American Journal of Pharmacy*, vol. xxix. p. 388.

Blue pill—is also liable to contain oxides of mercury, and thus to lose its mild character and operation through faulty preparation. In this the oxides are detected in precisely the same way as in the case of mercury with chalk.

Iodide of potassium—is occasionally contaminated with carbonate of potassa to the extent of impairing its medicinal effect. This is easily detected by adding lime water to the solution of the iodide, when carbonate of lime will be precipitated and render the mixture cloudy.

Bitartrate of potassa—frequently contains much tartrate of lime. This may be detected by stirring a few drops of liquor ammonia into a mixture of a few grains of the specimen in two or three drachms of cold water. The ammonia renders the otherwise insoluble potassa salt quite soluble, whilst it has no immediate effect on the tartrate of lime. If then a portion remains undissolved after the application of the test, it may be regarded as an impurity.

It is hoped that the simplicity of these tests for a few important substances may not only lead to their frequent adoption, but that the opening of the subject may stimulate others to search for and publish better tests, and to extend the list of substances that may be easily and simply tested.

March, 1858.

Art. III.—*On Matters of Novelty or General Interest, as at present exhibited in the Practice of the Hospitals of Paris.* By Geo. Suckley, M.D., late Assistant Surgeon, U. S. Army.

The Parisian journals of medicine, like those of all other countries, are constantly filled with new projects and methods of treating disease, which, although backed up by successful statistics, real or apparent, and the publication of isolated cases, merely live their day, and are shortly after forgotten.

I do not, therefore, purpose to take up all the novelties in medical treatment which have been advocated during the past winter, but merely to glance at a few of the leading matters that have lately caused more or less sensation in the medical world of Paris. Without classifying directly, into two groups, the double subject contained in the title of this article, I shall treat of the "matters of general interest" whenever their introduction is naturally induced by their connection with the novelties.

Foremost among the new things of the day, is the revival of Laennec's antimonial treatment of chorea. The novelty of the renewal consists in the exaggeration of the plan, and the heroic doses administered. To Mons. Gillette, of the Hôpital des Enfans Malades, is due the credit of the renewal of the antimonial treatment, which is now pursued as follows, for children say eight years of age:

The first day 20 centigrammes* of antim. tart. is given; on the second, 25; on the third day, 30. These quantities are dissolved in about three ounces of gum-water, and commence to be given to the patient, fasting, at an early hour of the morning, at the rate of a tablespoonful an hour, until it is all taken. During the administration of the doses no solid food is allowed, but the patient may take a little clear broth; the patient is also kept on his back while taking the medicine, but in the afternoons is allowed to get up and eat the usual hospital diet. If this course has not been sufficient, you will wait for the space of four days before recommencing the treatment, giving them 40 centigrammes (about 7 grains) of the remedy, in the same way, on the first day, and increasing the dose 5 centigrammes (nearly 1 grain), for each of the two succeeding days, observing the same regulations as before. If this does not cure, you again wait four or five days, and then commence with 55 centigrammes, augmenting the quantity daily, as before, and following the same rules. If the drug operates too much on the intestines, add a little laudanum to the solution. If these trials do not effect a cure, or cause radical amelioration, the treatment by tartar emetic should be abandoned. (NOTE.—The foregoing statement of the doses, etc., I have got from Dr. Miller, who has carefully watched the practice of the Hôpital des Enfans Malades. Dr. M. says that the children with this disease *generally* tolerate these large doses very well.

Blache, at the Hôpital des Enfans Malades, until recently, relied upon the shampooing process in treating children for chorea. When employing this latter method the average time of cure was twenty-five days. Blache now has, to a certain extent, abandoned the shampooing treatment for the antimonial; but not entirely, as a very obstinate case has lately resisted the complete exhibition of the antimonial treatment, in which he has been obliged to return to the shampooing process. This is nothing more than an addition to the mountain of proof that we cannot obtain *specifics* in medicine.

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* 100 centigrammes make a *gramme*, which is a fraction over 15 grains.

Becquerel does not seem to think much of the foregoing plan, as shortly after it had been publicly proposed, I saw a case of severe acute chorea in his wards, which he treated in the common-sense way by following the indications. The case was that of a young girl who, through cold, had a sudden suppression of the menses. Chorea manifested itself immediately, in a most aggravated form. In addition to the shower-bath and cold douche, which are his "sheet anchors" in this complaint, in the view of the obvious cause of the malady, a vicarious flow was induced by leeches, a large number of which were applied. I saw the patient a few days after, when she was rapidly recovering.

Trousseau's favorite method of treating chorea is by the administration of the sulphate of strychnine, in the following manner:

℞ Su'ph. strychniæ, centigrammes, 5. } Cap. coch. mag. ter
Syrup. simpl., grammes, 100. Misce. } in die.

Dr. Nathaniel Miller, of Providence, Rhode Island, now in Paris, informs me that he has seen a case of aggravated chorea, which had completely resisted Trousseau's treatment—carried on until the peculiar poisonous effects of strychnine had become dangerously manifested, rapidly cured by the antimonial treatment.

Mons. Briquet has lately advocated the *electric treatment for lead cholic.* He has demonstrated, very conclusively, that the *seat of the disease is in the muscular parietes of the abdomen, and not in the intestine.* By his treatment the pain ceases after every *application* of the agent, leaving the patient comfortable for an hour or longer. In the meanwhile, the ordinary treatment, for the elimination of the lead, can be employed. During the *application* of the electricity, the pains are greatly increased, but soon subside. Becquerel does not adopt the plan, but relies on the usual treatment by sulphuric acid and evacuants.

In Becquerel's service there have not been lately any cases of extraordinary interest, with perhaps the exceptional instance of a patient having a patch of "bronze skin" upon the forehead. Upon examination after death (from another complaint) the supra-renal capsule of the right side was found enlarged and carcinomatous, thus, to a certain extent, verifying a theory on the subject.

In testing urine for albumen, Becquerel prefers the pyro-phosphoric acid when a delicate test is required, this agent showing the presence of albumen, even when in as low proportion as one in ten thousand parts of urine. The pyro-phosphoric acid should be used within two hours after it is made, as, later than that, it takes up two other equivalents of water and becomes *ordinary* phosphoric acid.

A writer in the *Gazette des Hôpitaux* of December 15th, 1857, giving the results of the so called "purgative treatment" in the typhoid fever of children, as shown by the practice of M. Beau, makes use of the following strong language in opening his subject: "The purgative method, indubitably the best for the adult," (!) "should it be used in typhoid fever of infants (children)?" If the purgative method* *is* "indubitably the best for the adult" suffering from this disease (a theory which I think very few American physicians will admit), it is not relied upon by Becquerel, who prescribes but little for this disorder except good nursing; although, in rare cases, where there are severe local complications, he occasionally bleeds a little. Bouillaud, at the Charité, treats nearly all cases of this disease by bleeding.

The employment of mercury, in the Parisian hospitals, is almost entirely confined to its use as a cathartic, in which case very small doses of calomel are given, mixed usually in powdered white sugar. Except in the treatment of specific venereal diseases, the administration of mercury, to obtain its specific alterative effect, is almost entirely confined, in the hospitals of Paris, to the treatment of puerperal peritonitis and congestion of the liver.

A singular fact, noticed in the Parisian hospitals by a stranger, is that no means are attempted to isolate cases of the contagious eruptive fevers; these being placed indiscriminately throughout the wards. From what I can learn, these disorders are rarely communicated to the other patients; and as they are now considered very tractable, but little heed is given to them.

Several points in the general treatment in these hospitals are well worth noticing. Foremost is the prevalence of the "let alone treatment," unless there is a strong indication to the contrary. This seems to be particularly the case with Becquerel. In his service, also, whenever a patient is bled, the blood is analyzed; if more than the normal quantity of fibrine is found, the bleeding is repeated, and again, and again, if the superabundance of fibrine continues.

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* The "purgative method" of Larroque is the one employed. It consists in the administration of an antimonial emetic at first; which is followed afterwards by salts, repeated continually *for three or four weeks*, in sufficient quantities to produce four or five evacuations daily!!

A short time ago, I witnessed Becquerel apply the actual cautery to several cases of ulcerations of the os uteri. The agency of the electrical cautery apparatus was employed; and I noticed that he took pains to connect the wires, and heat the metal of the cautery, *outside* of the vagina.

At first, when using the electrical cautery, he was in the habit of heating the iron near to, or directly upon the surface to which he was to apply it; but finding that even in the comparatively short time he had been thus using the agent, that two cases of metro-peritonitis had occurred, he deemed it best to employ the iron already made hot before the introduction into the vagina, in the same manner precisely that the common actual cautery is used.* The same physician, in ordinary vaginal examinations, makes use of the *tri-valve* speculum by preference.

In surgery I have seen but little new since writing my former article. In that paper I mentioned Maisonneuve's method of amputating with the *écraseur*, and stated that the object sought by this mode is to lessen the danger of phlebitis and "purulent absorption." Judging from the success following the removal of hemorrhoidal tumors, etc., by this instrument, and the comparative infrequency of phlebitis as a consequence, it was but fair to suppose that, in hospitals where all operations with the knife had been unsuccessful from that very cause, there must be something more than mere accident to occasion such a manifest difference where the écraseur is used. Thus far, Maisonneuve has amputated ten times in this manner, as follows:—2 arms, 2 forearms, 1 thigh, and 5 legs. Of this number there have been two deaths; but on a severely exact post-mortem examination, no traces of purulent absorption or phlebitis could be detected.

The case of amputation of the thigh formed one of the two fatal cases. It is a pity that, in the view of the experiment, instituted there was not a larger proportion of amputations of the *thigh*, for comparison and examination.

Since the means used at first for breaking the bones have been improved and altered, and brought to their present perfection, the stumps following the operation are very good.

The case of injection of iodine into the knee-joint, for the cure of chronic synovitis, reported by me heretofore, was considered *cured* twenty-eight days after the operation. Several similar operations have been performed in the different hospitals within the past two months; and I have heard of one case in which both knees were injected.

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* A single case of metro-peritonitis had also occurred in a vast number of instances in which the common cautery had been used. Whether this was the *only* case that has occurred in Becquerel's wards, or the only case which has occurred during my informant's connection in Becquerel's service, I do not now remember.

Chassaignac has recently amputated the neck of the os uteri with the écraseur. I witnessed two of these operations, which were readily performed, and accompanied by very little hemorrhage, perhaps not more than two teaspoonfuls each. The ultimate results of these cases I have not yet ascertained.

In connection with the above subject, is the fact here stated, that not a single case of "Cæsarian section" has ever been performed in Paris, without sacrificing *the mother.*

The treatment of fractures is so faulty in Paris, that, to do the subject justice, it would require more space and time than can be at present spared. For some years past, all attempts to apply the extension treatment to a fractured thigh, have been abandoned, for the reason that all the methods known to the French surgeons were liable, if extension be kept up, to be followed with sloughs of the ankle, instep, etc. The plan of making extension by adhesive plaster bands, and the "straight apparatus," until March, 1858, had not reached the "focus of medical knowledge," although it has been in successful practice for over seven years in the United States.*

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* I wrote to New York for the apparatus in use in the New York Hospital. This was promptly sent me by Dr. D. C. Peters; and Dr. Buck very kindly forwarded me a letter, giving a brief synopsis of his success in thus treating sixty-one cases of fracture of the thigh, in which nineteen cases were cured with absolutely no shortening, and the other forty-two with the insignificant average shortening of but five-eighths of an inch. Prof. Nélaton, the first surgical clinical lecturer of Paris, and at present in charge of the surgical wards of the Hôpital de la Faculté, requested me to apply the apparatus to a patient in his wards, which I accordingly did, with great care, omitting not the smallest particular. Prof. Nélaton expressed himself well pleased with the idea of extension by the adhesive bands, as also with the apparent simplicity and efficiency of the improved straight apparatus shown; and regretted that he had no case of fracture of the thigh then under treatment in his wards, with which he could test the apparatus for himself. The patient upon whom the apparatus had been shown, unfortunately for us, not having a fractured femur, Prof. Nélaton requested me to furnish him with a translated copy of Dr. Buck's letter, which I accordingly did, and have also presented him with the complete apparatus, that he may use it for himself whenever he wishes. In speaking of the plan to Prof. Nélaton, I have called it the "American method," partly because I feel a national pride in the matter, and partly because, owing to the different modifications of the straight apparatus of Dessault, which are used in the hospitals of Philadelphia, New York, and Boston, I could only designate the permanent apparatus as the "American modification" of *Dessault's* splints, with the addition of the principle of adhesive plaster extension, the name of the original proposer of which I have forgotten. Dr. Nath. Miller, of Providence, Rhode Island, conjointly with myself, is having a similar apparatus made to be used in the wards of La Pitié, and afterwards to be sent to one of the principal London Hospitals, with the view of introducing the plan into that metropolis.

The treatment usually employed here for *ununited* fractures, is by the seton. Occasionally, however, cures have been effected by exsecting the ends of the fractured bones, and then dissecting up for a short distance, the periosteum from each fragment, and invaginating, as it were, the portions of the membrane towards each other.

Maisonneuve has now under treatment a case of recent fracture of the patella, which he is treating by a method original with him. He applies bands of adhesive plaster above and below the patella, in the form of a double "figure 8," encasing the whole limb afterwards in a stiff support of adhesive plaster, put on like ordinary "straps," but wider than those we use for strapping ulcers. The effect of this casing is much like that of the ordinary starched bandage, and, I think, scarcely more efficacious. The *whole* plan of the treatment strikes me as good, and I shall not be surprised if its results are favorable, and at least one step beyond the usual modes hitherto in use.

In Ricord's hospital, Hôpital du Midi, there are at present the usual number of afflicted. I learn, from the chef de clinique, M. Poisson, that since the last edition of Ricord's letters, a point has arisen to notice, which somewhat staggers the previous theories of that eminent specialist, concerning the convertibility or non-convertibility, of his two divisions of chancres; this is the fact, that chancres on the "face" (lips)? are *almost always* of the *hard* variety. To settle this point, a vast number of experiments would have to be instituted, which are precluded by the cruelty of submitting the subjects to such a risk, as well as the great danger of legal processes afterwards.

Ricord's treatment for indolent non-suppurating scrofulous buboes of the groin, is to touch the surface in points all over the enlarged gland, with a red hot iron—each point burnt being of about the size of a pea.

This is the same manner in which Maisonneuve uses the actual cautery for treating chronic strumous inflammation of the knee. He then applies pressure by means of a narrow india-rubber "roller bandage" neatly applied.

The latter surgeon, a short time ago, reduced a very large scrotal hernia by applying a similar bandage of india rubber.

At present, it is quite the fashion with the surgeons here to operate on fingers and toes which have had local anæsthesia produced by the freezing mixture. This is not new in the United States; but, perhaps, the hint thrown out by the Parisian experience, that the soft parts are very apt to suffer afterwards, if the cold is applied for a period exceeding three minutes may be of use to some.

Some time ago, Nélaton reduced a dislocated shoulder by means of the ordinary pulleys, working on a sort of spring steel-yard, called, I think, a "dynamometer." This, on its dial-face, gave the exact amount of force employed. An ingenious instrument for suddenly letting go the rope, thus saving it from being cut, as in the ordinary manner, was also used. The working of both instruments was quite satisfactory.

Jobert de Lamballe, at the Hôtel Dieu, has operated this winter on a case of the so-called "loose cartilage" of the knee-joint. His operation was neat and successful to a degree. From a report of the case, as found in the *Gazette des Hôpitaux*, and as furnished me by Dr. Webster Lindsly, of Washington city, D. C., who watched the case while under treatment, I am enabled to give the following condensed summary of its leading features:

Operation for the extraction of a movable foreign body in the cavity of the knee-joint by Jobert (de Lamballe) at the Hôtel Dieu.—On the 18th of November last, Jobert attempted to dissipate a "movable cartilage," which had previously been ascertained to be lying loose in the cavity of the knee-joint. His first operation was intended to effect the object by the "bruising" method. Owing to the hardness of the body, this operation was unsuccessful.

Several days afterwards, when all the commotion produced by the attempt had disappeared, the operation for the complete removal of the foreign substance was commenced, by puncturing the integuments at a point about 1½ inches above the outer side of the movable body. A very thin, sharp tenotomy knife was introduced into the wound thus made, and the instrument conducted subcutaneously to a point opposite the foreign body. The operator, then, by dexterously handling his knife, made a small concealed cavity, or receptacle, sufficiently large to allow the offending mass to be pushed into it. The cartilage being then pushed into this cell, the operation was stopped, and the wound closed by adhesive straps. The joint was kept in absolute quiet, and the usual antiphlogistic treatment adopted. Although, for some time thereafter, there was more or less of inflammation, pains, etc., in the joint, at the end of twenty-five days they had disappeared, and the patient was found in a completely satisfactory condition. Jobert then performed the second part of his operation, which consisted simply in cutting down upon the body, and removing it with forceps. The wound was then closed by two needle sutures. With ordinary care and treatment the patient rapidly recovered, notwithstanding a slight erysipelatous blush which showed itself on the third day. The foreign body was the size of an almond, ovoid in shape, and flattened on two of its opposite sides.

The principal interesting feature of this case, and which tended so directly to its happy result, was the length of time which was allowed to elapse between the sequestration of the "movable body" and the period of its ultimate extraction. Jobert insists that the period of repose between the two steps of the operation, should be at least from twenty-five to thirty days.

The "*Annales d'hygiène publique et de médecine légale*" of January, 1858, contains a paper by Mons. Ambroise Tardieu, Physician to the Lariboisière Hospital, on the medico-legal bearings of the crime of "*pédérastie.*" His work contains a record of the alarming and frightful extent of this crime in Paris, as developed by the examinations of 205 individuals either actively or passively addicted to the vice, together with remarks upon its effects upon the health—its diagnostic signs, and its bearing as a contingent of other crimes.

Dr. Tardieu is the chief medical examiner to the police in cases where expert testimony is required concerning rapes, etc., and is also a man of sufficient standing in his profession to have been appointed visiting physician to the most new and beautiful hospital in Paris. The disgusting details through which he has had to wade in making this report, have been manfully met. Actuated by devotion to science, and a sense of duty, he has written a paper singular in the extreme, upon a crime happily almost unknown in America. I have mentioned the existence of this report, for the benefit of those pursuing medico-legal studies, and in the words of the reviewer of the work, my excuse is—"La science est comme le feu, elle purifie tout ce qu'elle touche."

Regulation diet of the Paris hospitals.—The following is the diet system of the Parisian hospitals: The aliments are divided into bouillons, potages, soupes (au pain), aliments solides (solid aliments), and boissons (or nutritious drinks) —namely, wine and milk.

The diet of a healthy man in his natural state, is assumed at about 1,350 grammes of solid food (about 42 ounces). This, *at first*, when the general diet of the hospital patients became systematized, was called *one* portion; patients confined to less, being ordered one-quarter, one-half, etc., of a portion.

It was found, however, that the sick were very much dissatisfied at eating *parts* of a portion. In consequence, the full portion was divided into four parts, each called *portions;* and it was then found that the patients, who grumbled most lustily at being restricted to three-quarters of the old portion, were perfectly content with *three portions* of the new standard; although, in reality, the allowances were equal in weight.

There have been, however, several alterations in details; and the single portion as now used, although approximately in direct proportion to the old full portion, is still slightly varied. This is also the case with the others.

To give a correct notion of the shifting value of the different portions as now used, it is necessary to go into the following details. But I will premise by saying, that a patient, confined to what is called strictly *low diet*, is only allowed *broth* without bread, farina, or vegetables. The fixed daily amount of this article, is a quarter of a litre given twice—making in all a half litre per diem.*

A patient allowed a little higher diet, has two broths, and two soups a day. The soups contain a little bread or farina, rice, etc.—one *soup* contains a small trifle more than a quarter of a litre.

When one portion is prescribed, it contains: soup, twice a day, a quarter litre each time. Bread, a quarter kilogramme—about half a pound. Meat, six decagrammes—about two ounces. Wine, three portions, each containing about two and a-half ounces. This wine is light, red wine, coming from the middle of France. Milk, three-fifths of a litre daily, boiled. Note: The wine and milk may be exchanged for each other, at the patient's option.

Meat varies in quantity somewhat according to the number of portions, but not exactly. When one portion is ordered, the patient is supposed to be weak, and, therefore, meat of a better quality is ordered—such as roast beef, or fowl. The same quality is allowed when two portions of diet are ordered; but *two portions of diet* do not contain double the quantity of meat that *one* does; although a little more than this latter, being seven and a-half decagrammes (about two and a half ounces). Three portions of meat represent twelve decagrammes (about four ounces). Four portions, eighteen decagrammes (about six ounces); but the meat of the third and fourth portion allowance, is *boiled beef*. The usual amount of vegetables for one portion of diet, is fifteen decagrammes (say five ounces); but of the coarser kinds, as potatoes and cabbage, double weight is given.

With all the portions, there is a little boiled fruit or comfiture allowed.

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* The litre is equal to gall. 0.22.

Fish is given twice a week in lieu of meat, and a little more by weight allowed than of meat. The regular proportion is kept up with everything, but meat and milk. The milk of the hospitals is contracted for by the general administration, and is supplied every day fresh and pure.

It is the duty of the chief apothecary of each hospital to analyze this milk daily—and also to examine it with the polarimeter (sugar deviating the rays of polarized light).

Four portions of diet complete, contain: soup, morning and evening; meat, six ounces a day; bread, a pound; wine, from twelve to fifteen ounces.

No milk (except by replacement); vegetables, twenty ounces, and more when potatoes, etc., are given.

Extras: chop, beefsteak, Bordeaux wine, eggs, chicken, etc., are allowed only upon a *special written prescription* of the attending physician. Eggs, however, are sometimes given in replacement of meat; say one egg to replace two ounces of meat. The rule of the hospitals is to give *meat* itself, at cast four times a week.

Four portions are not often allowed in the hospitals of he city; as a patient, eating them, is supposed to be convaescent, and able to go to the hospital for convalescents at Vincennes.

A surgeon occasionally allows a patient five portions, but this is done very rarely.

The foregoing diet seems to be excellent and liberal for the usual run of *medical* patients; but it seems far too little to support those who are being rapidly weakened by excessive and long continued suppuration.

We, misguided Anglo-Saxons, think, that patients in this condition, crave and often require a much more considerable portion of food than men in a healthy state. This is to compensate for the drain of the suppuration. The stomach comes to the rescue of the poor suffering system. Should we not, they ask, put into this stomach what it demands? The building-up treatment of the English, or of our surgeons at home, casts far into the shade even the apparent prodigious allowance of five portions, by the French surgeons.

As an example of the contrary treatment in the United States, I would draw the attention of my readers to the case of a German who was under treatment in the New York Hospital, in the year 1851, for a severe compound fracture of the thigh. This man, although at one time fearfully emaciated, and, as the biographers say, on the "verge of dissolution," finally recovered, thanks to his stomach. The amount of suppuration from his various abscesses, bed-sores, and original wound, must have been, for nearly eight weeks, at an average of at least a pint daily; but the stomach coming bravely to the rescue of the patient, and the doctors and nurses efficiently aiding the stomach—although the amount of eggs, chops, beef, milk, brandy, porter, wine, poultry, etc., consumed by the creature was enormous—he lived to walk out of the hospital with a good limb—cursing those that had attended him, because he was discharged before he was able to work!

PARIS, *March 27th*, 1858.

ART. IV.—*Report of the Post-mortem Appearances in Eleven Cases of Cholera Infantum.* By J. LEWIS SMITH, M.D., Physician to the Northwestern Dispensary, New York.

WITH the single exception of Asiatic cholera, there is no disease in our city that proves so destructive to human life, in so short a time, as the summer complaint of children. During the three warm months of the year, from one to two thousand are swept off by this scourge; and a large number stricken by it, after weeks of progressive emaciation, go to swell the list of deaths from marasmus. From the fact that this disease is so fatal, and that, though a constant summer epidemic, its nature is not fully ascertained, I am induced to furnish for publication the following records of cases taken from my note-book, kept at the Northwestern Dispensary during last summer. The post-mortem examinations throw some light on the seat of the disease, and will aid in settling the mooted point, whether or not it be an inflammation. It was necessary, in several of the cases, to inspect the viscera through small incisions in the abdominal walls, so that the solid organs could not be brought into view, but the intestines were carefully examined in all.

Case 1.—C. S., a female infant, 12 months old, nursing and having six teeth, was brought to the Dispensary on the 26th day of June, 1857. According to the mother's statement, the health of the child had been good till four days previously, when she was taken with vomiting and purging, and her dejections had numbered ten or twelve daily since. She was feverish, but not drowsy or in pain; tongue dry and covered with a brownish fur. An opiate was prescribed, but without relief, and death occurred on the following day.

Autopsy.—No appreciable emaciation; intestines distended with gas; mucous membrane of small intestines vascular in places, but not in a marked degree; there were larger vascular patches in the ascending colon, and the descending portion was uniformly and intensely injected; this last part of the intestinal tract had almost as deep a color as that of mahogany. The other viscera were not examined.

Case 2.—E. M., a Dispensary patient, 14 months old, died of the summer complaint on the 5th day of July, 1857, after sickness also of five days. The ordinary symptoms of this disease were present, with the exception of vomiting.

Autopsy.—Body not emaciated; a little serum escaped on opening the abdomen. The small intestines did not present any notable alteration, with the exception of slight vascularity in places. The ascending colon was pretty uniformly injected; the descending was intensely red and thickened, presenting as well marked traces of inflammation as I have seen in the colon of the adult, after death from dysentery. The other organs were not examined.

Case 3.—M. L. H., seven weeks old, an almshouse child, was brought to the Dispensary on the first day of July, to be treated for diarrhœa of two weeks' continuance. The nurse who suckled him was suckling a child of her own, which also had diarrhœa. The almshouse child was placed on the compound powder of chalk and opium. *July 6th.* Is no better; dejections some days almost innumerable; eyes sunken. There is still no vomiting. *July 9th.* Death occurred to-day. The stools were frequent and without vomiting till near the close of life.

Autopsy.—The intestines examined externally, and the mesentery appeared more vascular than natural; the mucous membrane of the small intestines was injected in places; the entire tract of the large intestines presented greater vascularity than the jejunum and ileum, and in the descending portion the color was deepest and most uniform.

Case 4.—F., ten months old, died of cholera infantum on the second day of August, after about ten days' sickness. The dejections were green, and death occurred in convulsions.

Autopsy.—There was no appearance of disease in the stomach and small intestines, but the latter were, in places, considerably contracted; greenish feculent matter was lodged above the points of contraction; the ascending and transverse portions of the colon were slightly injected, but otherwise they presented the healthy appearance; the mucous membrane of the descending colon was much inflamed and ulcerated; the ulcers were generally circular, varying in size from a pin's head to a small pea; the mucous membrane was thickened and nearly of a mahogany color; the liver was perhaps more vascular than natural, but otherwise its appearance was not changed.

Case 5.—D. W. A., a foundling, nine months old, was brought up by a hired nurse since the age of three months. Though rather feeble, she continued to thrive on the ordinary diet of spoon-fed children till the latter part of July, when she was taken with the summer complaint. The discharges continued frequent, and of a variable color—green or yellow—till the 12th day of August, when death occurred. During the last week of her life she had sprue, and was almost constantly moaning. The woman who had charge of this child stated, that four other foundlings had died on her hands during the summer. All had vomiting and purging; one was sick only two or three days.

Autopsy.—No record was made of the condition of the stomach; the liver, small intestines, and ascending portion of the colon did not present any notable alteration; the mucous membrane of the descending colon was thickened, ulcerated and vascular, especially around the ulcers; the descending colon was also considerably contracted.

Case 6.—R., a foundling, four months old, died of the summer complaint on the 20th day of August. According to the statement of the nurse, he had had his usual health till two weeks before his death, when diarrhœa, without vomiting, occurred, which was checked in about three days. A relapse took place four days before his death, the stools being green and slimy, and attended with vomiting. He seemed to be in pain towards the close of life.

Autopsy.—Liver and stomach apparently healthy; spleen very dark, and I think softer than natural; the small intestines presented the usual appearance, but the mucous membrane could be easily removed by the nail, and the Peyerian patches were quite distinct; the mucous membrane of the descending colon was quite vascular; the follicles were distinct, but no ulceration was noticed.

Case 7.—W. M., a foundling, 4½ months old, was brought to the Dispensary in the latter part of August. The nurse stated that he had always been delicate, but that his bowels had not been so loose as to attract attention till the middle of August, since which time he had had frequent green and watery evacuations, with occasional vomiting. Death occurred on the 28th day of August, after sickness of about two weeks. The stools were very frequent during the last three or four days of life.

Autopsy.—Stomach and small intestines apparently healthy; a considerable quantity of watery substance in the latter, so acid as to blacken the steel; ascending colon also healthy; the left portion of the transverse and the descending colon were much thickened and ulcerated; at the sigmoid flexure the disease gradually disappeared. The portion of the colon which showed the disease most strikingly seemed to be almost putrescent, tearing easily. The nurse stated that the stools were very offensive. The gall bladder contained a moderate amount of yellow bile, and there was no appreciable change in the appearance or condition of the liver.

Case 8.—M. McK., 12 months old, nursing, was brought to the Dispensary on the 17th day of August. The mother stated that the health of the child had been good till the first of August, when the summer complaint commenced, and that since the tenth, there had been occasional vomiting. She became more and more emaciated, and although the vomiting and purging were partially checked, death occurred on the first of September, preceded by convulsions.

Autopsy.—The stomach and liver were not brought into view; the jejunum presented a healthy appearance; the mucous membrane of the ileum was uniformly red, and was easily scraped off; the ascending and transverse portions of the colon were not examined; the mucous membrane of the descending portion was softened, of a deep uniform red color, and easily detached; in the sigmoid flexure and rectum the disease gradually became less apparent; the fecal substance in the small intestines was green, and presented an acid reaction.

Case 9.—On the 9th day of September, I made the post-mortem examination of a female German infant, who had died of the summer complaint, at the age of twenty months. Her bowels had been loose several weeks, but the complaint did not assume a serious form till ten days before her death. She presented well-marked febrile symptoms, and during the last forty-eight hours of her life the purging ceased, and she constantly rolled her head and moaned. She had little or no vomiting throughout her sickness.

Autopsy.—The opening in the abdominal walls was not sufficient to bring the liver into view; the stomach and the jejunum presented their usual healthy appearance; in the ileum there were patches of inflammation extending two or three inches; the ascending and descending portions of the colon presented a uniform red appearance; the traces of inflammation gradually disappeared in the sigmoid flexure.

Case 10.—M. M., 12 months old, having had the summer complaint nearly all summer, was taken much worse with purging and vomiting in the first week in September, and died September 18th.

Autopsy.—Stomach and jejunum healthy, or nearly so; patches of inflammation in the ileum; the whole extent of the colon was vascular, but the descending portion was most diseased; the mucous membrane of this part of the intestine was thickened, ulcerated, and in places intensely injected; the inflammation extended, with little diminution, as deeply into the pelvis as I could trace it.

Case 11.—B., aged 13 months, having had the bowel complaint, with occasional vomiting, nearly all summer, died quietly, in a state of great emaciation, on the 9th day of October.

Autopsy.—Limbs much attenuated; abdomen protuberant; jejunum apparently healthy; ileum inflamed and slightly ulcerated; ascending and descending portions of the colon also inflamed and ulcerated, the former as much as the latter; bloody mucus could be scraped from the mucous membrane with the back of the knife. The stomach and liver were not examined.

The following is a *résumé* of the post-mortem appearances:

Stomach.—In six cases not examined; in the remaining five it seemed healthy. This fact is the more interesting when we consider that some eminent writers have asserted that the stomach presents the lesions of inflammation, and recollect that one prominent and obstinate symptom is referable to this organ. I find, however, from my notes, that vomiting was not present during the period of treatment at the Dispensary in forty-six patients out of an aggregate of one hundred and thirty-three; and in only twenty-four of those who suffered from it did it occur at the commencement of the disease.

Small intestines.—In three cases these appeared natural; in four they were moderately or slightly injected in places; in the remaining four the records state that the jejunum seemed healthy, but the ileum was more or less inflamed; continuously so in only one.

Ascending colon.—In two cases it was not examined; in two it presented the usual healthy appearance; in five it was vascular in patches, and in the remaining two it was uniformly injected.

Descending colon.—This, in all the cases, was the principal seat of the inflammation, presenting a continued red surface. In four cases, the records state that the mucous membrane was thickened; it may have been in others. Follicular ulceration was present in five cases. In two or three instances, on tracing the intestine into the pelvis, it was noticed that the signs of inflammation gradually faded.

Liver.—This organ was inspected in only four of the examinations; in three of these it is stated that there was no appreciable alteration in its condition; in the other case it was also natural, unless congested.

We may instance the following particulars, in reference to these cases, as especially important:

1st. That the stomach, though so irritable in the disease, and the liver, in the few instances in which it was examined, did not present any notable alteration from the healthy state.

2d. That in all the cases there was well-marked intestinal inflammation. Two died when only five days sick, and yet in both the descending colon presented the inflammatory lesion in a high degree.

3d. That the inflammation was not confined to the mucous follicles, as it has been stated to be by some writers; but it extended in patches over the mucous surface.

4th. The portion of the intestinal tract in which the inflammation was most intense, was in all the patients the descending colon, and colitis was the only lesion invariably present.

Art. V.—*Obstetrical and Medical Cases.* By George T. Elliot, Jr., M.D. Physician to Bellevue Hospital; the Nursery and Child's Hospital; and the Lying-in Asylum.

Hysterical convulsions and hemiplegia.—Hannah —— was brought into the surgical ward of Bellevue Hospital, March 4th, 1858, where Dr. J. J. Campbell, the house-surgeon requested me to visit her, and she was transferred to my service. Dr. J. R. Buist, house-physician. When I saw her she lay in an exhausted condition, apparently unconscious, but capable of being roused, and of answering questions. She was unmarried, well formed, healthy looking, had no menstrual irregularity, last period having occurred on Feb. 1st. For two weeks she had been troubled with severe pain in the head, circumscribed to a spot about two inches square over the right fronto-parietal suture, for which she had sought relief in constant cold lotions. At the end of this time, she complained to her friends of a numbness and weakness in the left hand, extending up the arm. Three days before admission she was seized, after retiring, with a strong epileptiform fit—both sides affected—foaming at the mouth—tongue not bitten. When this had ceased, her left side remained paralyzed. She declared then, and subsequently, that she was unconscious from this period until her admission. It is certain, however, that the convulsions had continued, and that the left side was chiefly affected in the attacks. Presently, while I was watching her, she had a well marked convulsion, without protrusion of the tongue, great suffusion of the face, stertor, loss of consciousness, or foaming at mouth. The character of the convulsion was hysterical. Chest normal, bowels confined, urine normal. No signs of paralysis about face, tongue protruded in a straight line, sensibility of left side unimpaired, though loss of motion, apparently absolute except during the convulsion. Pulse 56, with well marked intermission every 4th or 5th beat; resp. slow. These convulsions were very numerous indeed. On the following day, a drop of croton oil was given, by Dr. Buist, in half an ounce of castor oil, and a blister applied to the nucha. On the 6th, as there had been no action from the bowels, an ounce of epsom salts, followed by a warm enema, was given without relief. In the evening she was passing her urine involuntarily. I ordered one drop of croton oil and four grains each of calomel, and podophylline, which brought away several dark and offensive stools the next day.

At this time the diagnosis was obscure—her condition was such—convulsions constantly recurring, hemiplegia perfect, strength feeble, and expression bad—that it seemed inhuman to dwell upon hysteria, though the convulsions, which I had frequent opportunities of showing to the class, were uniformly of the character described. Under these circumstances, I requested Dr. Clark to visit her, who thought, with me, that time was a necessary element in the diagnosis. After evacuation of the bowels, the pulse had risen to 80, and the convulsions became less frequent, and in the evening she seemed better, and more rational. Four leeches were applied over the painful spot elsewhere described. 15th. She has remained pretty much in the same condition. Control over the bladder now regained—convulsions no longer affect the right side—voluntary motion of the leg has been regained, and she is now able to raise her left arm. Suspicions of hysteria much strengthened, ordered one grain of the valerianate of iron three times a day. 19th. Has improved so rapidly that she can now walk the ward without assistance. Since this time she has continued to improve, and is doing well.

Acute articular rheumatism—Double pneumonia and pericarditis.—Dr. Buist, house-physician; Dr. E. W. Lambert, senior-assistant.—Ellen McGill, English; single; aged 17; hearty-looking girl; admitted March 5th, 1858. No hereditary predisposition. On the night of February 18th, she slept for some hours on the floor of a cold room, and awoke much chilled. On the following day there was such acute pain in her wrists and knees that she could not rise, and continued in bed for several days. Though not improving, her mother made her sit up in a cold room; and a few days after, her father, while drunk, drove her out in the snow, where she remained several hours. All her previous symptoms became much aggravated; in addition, she was attacked with severe pain in her right side. When admitted, she was suffering with pains in her joints and chest, the latter not localized. Respiration hurried and difficult; face flushed; skin dry and hot; tongue moist, clean, but slightly fissured. Pulse 130, full and of good strength. Wrists slightly swelled; legs œdematous. No expectoration, but a slight hacking, persistent cough.

Physical signs.—Dullness commenced at the upper margin of the third rib, on the left side anteriorly, and posteriorly about two inches below the spine of the scapula, extending to the base of the lung. Over this entire surface there was well-marked bronchial breathing. Pneumonic crepitation best heard anteriorly over the third and fourth ribs, right lung. Dullness and pneumonic crepitation in the axilla and over the third or fourth ribs. Respiration otherwise normal. Heart sounds seemed natural, but very indistinct. Oiled silk jacket, twenty dry cups to left side.

℞. Ant. et Potassæ Tart. . . gr. j.
Solut. Morph. Sulph. (U. S.) ℥j.
Sodæ et Potassæ Tart. . . ℥jss.
Aquæ . . . . ℥viij.
M. Tablespoonful every two hours.

10 P.M. Resp. much easier; pulse 120; profuse perspiration; incessant cough, but no expectoration. Face much inclined to lividity.

March 6th.—11 A.M. Resp. 40, pulse 120. Face much flushed; rheumatism much better. Dullness anteriorly extends to within two inches of the clavicle; slight roughness with first sound of the heart heard over the third rib, near the sternum. Sixteen dry cups to left apex. 12.30 P. M. No marked change. 6 P.M. Resp. 40, pulse 128. No other change. Tr. verat. viride gtt. xv. every three hours. Ten dry cups to the kidneys. 8.30 P.M. Resp. 40, pulse 124; slight pneumonic expectoration. 10 P.M. Resp. 40, pulse 120; otherwise the same. *Midnight.* Resp. 40, pulse 116; somewhat nauseated.

7th.—8.30 A.M. Resp. 52, pulse 108. Has vomited. Tr. verat. viride discontinued. 8.50 A.M. Resp. 45, pulse 120; constant cough; no expectoration; skin moist, tongue ditto. 11 A.M. Resp. 56, pulse 120. 1.50 P.M. Resp. 48, pulse 98. Vomited her dinner. All medicine stopped. 6 P.M. Resp. 56, pulse 112; skin very moist, tongue slightly dry. No vomiting since last visit. 8.50 P.M. Resp. 48, pulse 116. Short cough, with no expectoration. Pain and tenderness in right knee, with some effusion; slight ditto in left knee. Auscultation of the heart gave a loud, rasping, double-friction murmur over the second and third left ribs, for a space of about two square inches, at the same spot where the slight roughness was noticed yesterday morning. Murmur very superficial, and not transmitted along the great vessels. Heart's apex not recognizable, but evidently pressed up. Skin very moist; tongue dry. Medicine renewed. 11 P.M. No change. Resp. 52, pulse 120. Blister 4 × 4 over base of heart.

8th.—6.30 A.M. Patient very comfortable. Resp. 44, pulse 108. Skin very moist; tongue slightly dry in the centre; countenance with better expression. 9 A.M. Resp. 48, pulse 112. 1.30 P.M. The patients in her ward have been transferred up a flight of stairs into a new and cold ward. Resp. 56, pulse 120. Countenance very anxious. 5 P.M. Resp. 48, pulse 108. Sleeping. Dullness over præcordial region much diminished. Friction sounds have altered in tone. Diastolic very indistinct. Tinct. verat. vir. every two hours, with sal Rochelle.

9th.—6 A.M. Resp. 40, pulse 124. Has continued to sleep during the night. Expectorates a muco-purulent viscid matter. 9 A.M. Resp. 48, pulse 116. General condition good. Dullness over præcordial region much diminished, confined to left of median line, and from the third rib downwards. Apex distinct, under the nipple, four and a half inches from the median line. In the recumbent position the friction sound is only heard with the systole; indistinctly double in the erect posture. A sub-crepitant râle adjoins the apex. Posteriorly, bronchial breathing and crepitation over the left lung. Over right, normal. Continue medicine. Ordered wine. 6 P.M. No change. Resp. 52, pulse 120. Ten leeches to cardiac region, which bled freely for three hours, when the orifices were closed with mati, and kino, and pressure. 10 P.M. Twelve grains of Dover's powder.

10th.—8 A.M. General condition good. Slept some during the night. Resp. 48, pulse 116. Tongue moist. 6 P.M. Sits up in bed. Cough troublesome. Expectoration as before. Friction sound with systole, but over a limited space over the base of the heart. Tr. veratrum viride stopped.

11th.—Resp. 48, pulse 116. Improving.

12th.—Resp. 40, pulse 120. Friction sound ceased. Patient very self-willed; rises from her bed to walk over the ward at night.

13th.—Resp. 40, pulse 124. Sweating freely. Joints still affected. Vinum colch. sem. combined with sal Rochelle.

14th.—Febrile action still considerable. Wrists and knees still painful. Continues to leave her bed at night.

15th.—Fever still quite active; pulse 128. Skin hot; tongue moist; much pain in the joints. Murmur heard at the apex with the systole.

18th.—No improvement seeming to follow the alkaline treatment, the patient received ℥ss. of lemon juice every three hours, at Dr. Elliot's suggestion.

19th.—Face less flushed; febrile action continues; pulse 128. Rheumatic pains somewhat relieved.

22d.—Expectoration purulent, viscid, and very abundant.

23d.—Expectoration the same. Over left side posteriorly there was dullness at lower angle of scapula, bronchial breathing, and broncophony very distinct. Subcrepitant and crepitant râles extending to base of lung.

25th.—The above signs of pneumonia have entirely disappeared. Fever also much less. Pulse 120.

27th.—Patient improving. Pneumonia gone; mitral murmur very distinct. Evidences of slight hypertrophy of heart.

April 10th.—Patient walking about, and, excepting occasional attacks of angina pectoris, very comfortable.

21st.—Nothing new to add.*

Uncontrollable vomiting in pregnancy—Exhaustion—Induction of premature labor with the douche—Death—Autopsy.—The following notes were taken by Drs. E. W. Lambert and N. Barrow, senior-assistants.

Ellen McGowan; aged 32; Irish; married; ninth pregnancy; has never miscarried, and has had easy and good labors. About January 1st, 1858, was first taken with nausea and vomiting, which became persistent. For three weeks the material vomited was bitter, and often green; afterwards not bitter. Always constipated; bowels only moving after the administration of medicines.

Bismuth, lime water, hydrocyanic acid, bicarbonate of soda, chloroform internally, creasote, hyposulphite of soda, blisters to epigastrium, simple, and sprinkled over with morphia, and many other remedies were tried with little or no effect. Supporting treatment was resorted to by the mouth and by the rectum, but she steadily lost ground from the date of her admission. Feb. 13th a consultation was called, and a second on the 15th, in both of which Dr. Elliot's desire to induce premature labor was not supported. On the evening of the 16th Dr. Metcalfe sanctioned the operation, and she was transferred to the lying-in ward at half-past nine, P.M. She was then in a very critical condition, almost exhausted; but refused to be carried, and walked between two assistants. She sat in a chair several minutes without being noticed, as three other deliveries were going on at that immediate time. Pulse 104, small and feeble. On vaginal examination the os uteri was found quite patulous, head low down and movable; plenty of liquor amnii. Fœtal heart distinct. 10.45 P.M., a warm douche of one and a half gallon played against and within the uterine orifice, and patient immediately covered up warm in bed. Two tablespoonfuls of iced champagne were given, and immediately rejected. Feb. 17th, 3 A.M.—Several warm douches, followed by hot-air bath, as she complained of chilliness. 7 A.M. Pulse 94, and of the same character. Patient has refused the champagne, asked for tea, and occasionally for water. Fœtal heart not now perceptible. 9 A.M. Dr. Elliot's visit. Pains are commencing, regular and of some force. Uterine action commenced before the patient was aware of it, and when told of the fact, denied that she had any pains. At 10.20 the membranes were ruptured. Fœtal heart again heard. Child born, living, at 2.45 P.M., apparently between seven and eight months, small and puny. Injections of brandy and the wine of ergot given. Uterus contracted well. At 4 P.M., the placenta remaining wholly within the uterus, Dr. Elliot introduced his hand and found it entirely adherent to the anterior wall. No hour-glass or irregular contraction. Removed with some difficulty, but without hemorrhage. Endeavored to give her milk in small quantities, which she relished, but continued to sink, and died a little after midnight; the infant having died just before. Intelligence uninterruptedly clear; vomiting never having been checked. *Autopsy* by Dr. Lambert thirty hours after death. Head not examined.

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* Since writing the above, Ellen had a severe attack of angina pectoris, and died. No post mortem obtained.

Chest.—Right lung healthy, with a small cicatrix at the apex. Left lung everywhere adherent from old pleurisy, at apex a few unsoftened tubercles. Heart healthy.

Abdomen.—No peritonitis; stomach contained no fluid. Mucous membrane has a slight greenish yellow tinge, and somewhat mammillated. No softening, except in greater cul de sac; no traces of inflammation. Spleen natural in color, size, and consistence; liver of normal size and color. General and marked softening; posterior and under surface of a semi-fluid and pultaceous consistence. In attempting to remove the organ the fingers would sink their entire length upon the slightest pressure. Gall-bladder natural. Kidneys pale, flabby and soft. Secreting portion apparently normal. Uterus well contracted, but the tissue easily lacerated. Cavity contained a few small coagula. No signs of inflammation. The miscroscope showed that the liver cells contained no unusual amount of fat; some cells were partially disintegrated, and free granular matter was very abundant. Some kidney cells somewhat granular.

Puerperal mania.—Dr. J. R. Buist, house-physician.—Mary Young, German; unmarried, aged 24; primipara; entered Bellevue Hospital Sept. 9th, 1857. Nothing worthy of note in her mental or bodily state until her confinement on the 9th of October, when she had a natural and speedy labor. 14th.—Visited by the child's father, with whom she had a violent quarrel, greatly exciting her, and in which she used the most violent and profane language, and could only be quieted by persuasion and threats. During the two following days she remained anxious and agitated, and talked much to any and every one. Expression staring and unnaturally animated; at one moment sorrowful, and then displaying silly levity; voice unnaturally shrill. Complained of extreme abdominal tenderness and great dysuria, craving relief though the bladder was empty. Resp. hurried, pulse 130, and weak. Bowels confined. Ol. ric. and haust. anod. 20th.—Has uniformly declared herself well, but would stop all passers-by with accounts of herself and her troubles. To-day she has been disorderly, and has accused the nurse of poisoning her. When approached by Dr. Buist she became greatly excited, sprang up in bed, talking volubly, with much gesticulation, and accusing him of endeavoring to destroy her with ℥ij. of morphia. Spoke of her infant with much affection. At 9, P.M., stole up to the rooms of the house staff and shouted the most abusive epithets, so as to alarm the patients in neighboring wards, and had to be forcibly carried to the cells, when it was thought best to separate the child from her, as she had been seen stuffing it between the bed and the wall. 22d.—Visited by Dr. Clark and myself. She was now calm, collected, talked rationally about herself, though she spoke continuously and hurriedly as long as her strength would permit, with an occasional silly expression. Some urine being drawn with the catheter gave no evidences of albumen. Bowels constipated. Hyd. chlor. mit. gr. v. and followed by oil, produced several copious stools, dark colored and very offensive. After this, large doses of the Tr. of hyoscyamus and Hoffman's anodyne failed to procure sleep. 23d.—Became violently delirious during the night. Broke every glass in the window; tore up all her bedding and clothing; cursed and swore; sung and talked incessantly, awhile in German and then in English; and finally had to be confined to the bed with belt and handcuffs. This delirium continued during the 24th and 25th, raving about the man with whom she had lived and her child; that she had just come down from heaven, was expected back immediately; snatches of songs; and again would refuse to keep her bed as she there saw an old man who would kill her. On the 24th the calomel was repeated, with an injection of opium, assafœtida and camphor. Beef-tea and milk-punch. In the erect posture, pulse 140; lying down, 114. Voice very hoarse. Constantly trying to spit a scanty, tenacious saliva. 26th.—Calm and quiet; had willingly taken an egg and other nourishment. Pulse, 116. Still wandering and incoherent in conversation. Morph. sulph. gr. j. an hour for four hours, without producing sleep, though the pupils became much contracted. 9th.—Has slept during the night; but as wild and delirious as ever this morning. Obscenity and profanity; self gratulation; revenge, hatred, and affection were uttered by her indiscriminately and incessantly. 9 A.M. pulse 140. At this time I desired Dr. Buist to give her gtt. iv. of the dilute hydrocyanic acid every four hours, which she took (if my memory serves me correctly) during at least thirty-six hours. At one time, by accident, gtt. viij. were given without ill effects. Its effect as an arterial sedative was well shown, for at 1 P.M. the pulse fell to 120, and at 5 P.M. to 80. 30th.—Quieter, and in all respects improving. No farther treatment. From this date to Nov. 14th, she grew steadily better, having only occasional fits of delirium, and at that date needed no restraint. Dec. 12th.—She again became delirious, and almost as unmanageable as ever. And a month elapsing without improvement, she was transferred to the lunatic asylum.

This is the third case of puerperal mania in which I have made the urine the subject of careful examination, without in any one instance detecting albumen, or other deviation from the standard of health. The two other cases recovered nicely, though convalescence was somewhat protracted in one.

The following cases of puerperal fever occurred in Bellevue Hospital during the month of February, 1858, and were carefully recorded by Dr. R. C. McEwen, house-physician, and Dr. S. R. Forman, senior-assistant, who also made the minute record of puerperal convulsions in the case of Mary Connors, published in the present collection.

It is interesting to note that I have never seen erysipelas so prevalent in the hospital, since my connection with it, as in the months of February and March. One little neonatus, in the lying-in ward, was attacked with erysipelas of the face, spreading to the trunk, and terminating in perfect recovery.

Forceps — Puerperal fever—Death — No autopsy.—Rose Swift, native of Ireland, aged 22, domestic. Came into the hospital in labor, Feb. 9th, and, after a labor of 36 hours' duration, was delivered by forceps of a living, healthy child. The head was retained before completion of its descent by excessive flexion. Dr. Barker was called in consultation, chloroform given, and the forceps were applied by Dr. G. T. Elliot, and the delivery completed at 9 A.M. Feb. 10th.—Patient's pulse, before delivery, was 96; at 12 M., she was transferred to ward 10.

FEB. 10th.		Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	'SYMPTOMS AND RESULTS.
				Gr.	Gtts.	
12 M.				⅛		
12.30	P.M.	100		¼		Pulse very quick.
1.30	“	120		¼		Slept a little.
2.45	“	120		¼		Awake.
4	“	120	22	¼		
5	“	120	20	¼		Pupils slightly contracted.
6	“	120	22			Sleeping, itching of nose, some tympanites.
7	“	128	22	⅜		Sleeping.
9	“	136	20	⅜		Slept soundly during the hour.
10	“	142	22		10	Tympanites increased.
11	“	140	19		10	Sleeping.
12	“	124	18	¼	10	Awake. Pupils contracted. Tongue somewhat dry.
Feb. 11th,						
1	A.M.	136	19	¼	10	Sleeping. Tympanites increasing. Pain in a small spot in the left iliac region. Tongue moist and slightly furred. Skin natural. Pulse full and quick.
2	“	132	21	¼	10	Asleep.
3	“	136	17		10	Tympanites increased—no pain—no tenderness.
4	“	126	16	¼	10	
5	“	132	20	¼	10	Sleeping.
6	“	144	19	¼	10	Tongue red in middle—no pain or tenderness. Tympanitic.
8	“	124	12			Respiration catching. Pupils well contracted.
9	“	124	12			Pulse weak. Brandy ½ oz. every two hours—eggs and milk.
10	“	140	17	⅜		
12	M.	132	16			
1	P.M.	134	20	¼	10	Tongue moist.
2	“	136	18	¼	11	Tympanites increased—Lochia offensive—ordered vaginal injection of Sal Labarraque 1 dr. to Oj. warm water every four hours—turpentine stupe over whole abdomen.
4	“	144			6	A saturated tincture of veratum viride was now used.
5	“	132	16			Had vaginal injection.
6	“	130	18	¼	9	Turpentine stupe to abdomen.
7	“	130	20	¼	12	Tongue dry—Tympanites same—Tenderness on pressure.
8	“	136	20	⅜	15	Tongue moist—Skin hot and pungent.
9	“	102	22			Pulse becoming feeble and irregular—Jactitation —Vomited—Another vaginal injection and turpentine stupe. Stimulants used freely.
10	“	108	18			Pulse scarcely perceptible—Jactitation—Pupils contracted.
11	“					Pulse still very feeble—Jactitation extreme—Respiration labored—Tympanites diminished—Continued to sink, and died at 1.30 A.M. Feb. 12th.—No Autopsy.

Puerperal fever—Recovery.—Ann O'Neil, native of Ireland, aged 28. Labor began Feb. 6th, at 7 P.M.; waters broke at 9.45 P.M.; delivered of a boy at 10 P.M.; presentation, L.O.A. On the evening of the 8th, patient had a chill, at 12 P.M.

Feb. 9th.—Pain and tenderness in the hypogastric region. Lochial discharge dark; tongue coated. Some tympanites. A turpentine stupe was applied to the abdomen during the night. In the morning, a blister 3 × 4 was applied to the right iliac region; dressed with mercurial ointment.

Feb. 10th.—Pulse 96, and full; tongue coated; complains of pain in abdomen, on coughing. Lochia still continue. Tympanitic; countenance pale; skin cool; milk plentiful.

FEB. 10th.	Pulse.	Respiration.	S. Morphiæ.	SYMPTOMS AND RESULTS.
			Gr.	
12 M.	104		$\frac{1}{4}$	
1 P.M.	104		$\frac{1}{8}$	
2 "	104		$\frac{1}{4}$	
3 "	104	25	$\frac{1}{4}$	
4 "	100	26	$\frac{1}{4}$	Pupils slightly contracted—Itching of nose.
5 "	100	22	$\frac{1}{4}$	
6 "	78	16		
8 "	88	13		Sleeping.
9 "	84	11		
10 "	88	11		
11 "	88	10		
12 "	83	12		Perspiring freely.
Feb. 11th.				
1 A.M.	82	11		
2 "	86	11		
3 "	78	9		Respiration irregular—Perspiring.
4 "	78	15		
5 "	72	16		
6 "	72	18		
7 "	64	19		No tympanites—no pain or tenderness.
8 "	96	18		
9.30 "	96	20		Transferred to Ward 32.

Scarcely any febrile excitement the day after being transferred. Free from pain or tenderness; tongue natural. Lochia suppressed; slight tympanites; milk still secreted. Feb. 17th.—Has had slow, but uninterrupted convalescence.

Puerperal fever—Recovery.—Catharine Butler, native of Ireland, aged 23, married. Labor began at 12 P.M., Feb. 5th. Delivered, after an easy labor, at 12.45 A.M., Feb. 6th. Presentation L.O.A. The membranes were somewhat adherent.

Milk and lochia were normal, and the general condition of the patient good, until the 9th, when she was found with tympanites and localized tenderness. Pulse quick, but not frequent. Ordered blister 3 × 4, and dressing of mercurial ointment. Feb. 10th.—Passed a pretty comfortable night. Tympanites and tenderness somewhat increased.

Feb. 10th.	Pulse.	Respiration.	S. Morphiæ.	SYMPTOMS AND RESULTS.
6 P.M.	96	23	Gr.	
8.15 "	88	23		Comfortable.
9 "	84	22	¼	
10 "	96	20		
11 "	82	15	⅛	
12 "	96		⅛	
Feb. 11th.				
1 A.M.	96	18	¼	
2 "	90	19	¼	
3 "	96	20	¼	
4 "	102	20	¼	
5 "	94	15	¼	
6 "	108			Respiration irregular.
7 "	104	18		Has not passed water during the day—Little tenderness—Tympanitic.
8 "	128		⅜	Tongue furred—Respiration frequent and irregular.
9.¾ "	90	16		Passed water on application of warm cloths—Lochia profuse—Bowels moved yesterday. Transferred to Ward 32.

Feb. 11th.—Pulse 104; some heat of skin; slight tympanites; some tenderness. Nervousness and depression of spirits. Complains of headache; no appetite. A day or two after, much better, though milk and lochia were suppressed. About the 14th, complained of want of sleep, headache, and malaise. Pulse 130. Pills of assafœtida and belladonna. Feb. 17th.—Convalescing; improvement continued, and on the 19th was sitting up.

Puerperal fever—Recovery.—Mary McGuire, domestic, native of Ireland, aged 28. Primipara. Delivered of an eight months' child, Feb. 11th, at 6.30 A.M. Patient did well until morning of Friday, Feb. 12th. At 8 A.M., had a chill. Lochia ceased; marked tenderness in the right iliac region. Abdomen tympanitic. Slight secretion of milk. Blister 3 × 4 and mercurial ointment. 6 P.M.—Tongue coated. Tenderness in right iliac region more marked and extended over the uterus. Lochia returned, after application of warm cloth to vulva. Respiration hurried; face flushed. Bowels moved by ol. ricini, ℥j. Pulse 132. At 7 P.M., took ¼ gr. morphine; again, at 7.30. At 8 P.M.,

¼ gr. ; dozing. 10.30.—Pulse 130 ; resp. 27 ; gr. ¼, sleeping. Perspiring freely ; complains of nausea. 11 P.M.—Pulse 120 ; resp. 26.

FEB. 13th.	Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
			Gr.		
1 A.M.	112	20	¼		Sleeping—decubitus dorsal—knees drawn up.
2 "	112	20	¼		Tympanites increasing—pain and tenderness in the left iliac region.
3 "	112	20			
4 "	118	18	¼		Passed catheter, and drew off 16 oz. of high-colored urine—Thin watery discharges from bowels—Vulva, hot and dry—Pupils contracted.
5 "	126	20	¼		Sleeping quietly.
6 "	120	19	¼		Tongue dry—Complains of thirst.
7 "	120	20	¼		
8 "	116	16	¼		
9 "	120	16			
10 "	120	20			Lochia natural—Tenderness over uterus marked. Slight secretion of milk—Tympanites still marked.
11 "	120	16			Bowels moving—Frequent, thin, watery discharges.
2 P.M.	112	14			
3 "	120	12			Suppos. opii (gr. 2), ordered for bowels, had been given by mouth.
4 "	112	12			Skin hot and dry—Free from pain.
5.30 "	108	18			Bowels not so loose—Lochia continue.
6.30 "	112	17			
8 "	102	20			
9 "	112	20			
10 "	114	19	¼		Skin hot and dry—Urine drawn again, 20 oz.
11 "	108	20	¼		Tympanites less—Bowels quiet—Pain in right iliac region.
12 M.	124	20	¼		
Feb. 14th.					
1 A.M.	110	20	⅛		Bowels still moving—Suppositories continued.
3 "	102	18	¼		
4 "	108	14			Sleeping.
5 "	110	20	⅛		
6 "	110	18			Tongue dry.
8 "	110	16			Bowels moving.
9 "	108	22	⅛		Some tympanites and tenderness—Lochia dark, and not very offensive.
10 "	112	24	¼		Pupils not much contracted.
11 "	120	22	⅛		Suppository again.
12 M.	126	18			
1 P.M.	126	18	¼		Perspiring—Tympanites and tenderness the same—Bowels more quiet.
2 "	108	18	¼		

FEB. 14th.	Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
			Gr.	Gtts.	
3 P.M.	114	16	¼		Respiration irregular—Pain in hypogastric region.
4 "	116	16	¼		
5 "	120	18	⅛		
6.30 "	112	15	¼		
7.30 "	110	20			Respiration irregular—Suppository.
9 "	114	17			Tongue very dry.
10 "	108	18	⅛		
11 "	116	15			
12.30 "	116	17	¼		Skin hot and dry.
Feb. 15th.					
1.30 A.M.	110	14	¼		
2.30 "	108	14	⅛		
4 "	120	20	¼		
5 "	120	18			
7 "	112	16			
9 "	102	12			Feels no pain—Tympanites the same.
11 "	90	15			Tongue moist, furred, and white.
12 M.	108	15	¼		
2.30 P.M.	114	19	¼		
4 "	114	21	¼		
5 "	112	18	¼		
7.30 "	120	16			
9 "	112	16	¼		
10.30 "	120	10	¼	10	
11.30 "	114	20	¼	10	
12.30 "	104	20	⅛	10	Tongue moist—Skin moist.
Feb. 16th.					
1.30 A.M.	106	22	¼	10	
2.30 "	100	22	¼	10	
5 "	100	16	¼	10	
7.30 "	90	13		10	Tympanites—Pain and tenderness less.
9.30 "	88	17			Sleeping—Pulse fuller.
11 "	82	22			
12 M.	102	30	¼	5	
1.30 P.M.	102	30	¼		Urine again drawn.
3 "	100	22			
4.30 "	94	16	⅛		Skin hot and dry—Pulse full and strong.
6 "	108	24	¼	15	Perspiring freely.
8.15 "	94	20	¼	10	Talking in her sleep—Pupils not contracted.
9 "	104	22	¼	15	
10 "	112	24	¼	15	
11 "	104	18	¼	15	
Feb. 17th.					
1 A.M.	96	18	¼	10	
3.30 "	72	14			
4 "					Asleep.
5 "	70	18			Comfortable.
6 "	66	17			

FEB. 17th.	Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
			Gr.	Gtts.	
7 A.M.	62	20			
8 "	66	18			
9 "	76				Slight pain on moving—Feels weak—Lochia ceased.
10.30 "	100	15	⅛	10	
11.30 "	92	24	⅛	5	
2 P.M.	90	24			
3 "	96	24			
4.30 "	96	18	⅛		Urine again drawn, 12 oz.
6 "	102		¼		Respiration hurried.
8.20 "	90	24			Skin moist.

Patient continued from this time to improve. Diet of beef tea, farina, rice and milk during sickness. March 11th.—Looking well—sitting up.

Puerperal fever—Death and Autopsy.—Briget Craven, native of Ireland, domestic, aged 23, primipara, was delivered of a healthy child, Feb. 10th, after an easy and natural labor. Was doing well until about 9 P.M., Feb. 13th, when she was attacked with rigors. Her pulse, which previously had been about 92, began to increase in frequency. There was no pain or tenderness, and but slight tympanites. No cessation of lochia; milk secreted.

FEB. 13th.	Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
			Gr.	Gtts.	
10 P.M.	120	20	¼		Bowels opened by ol. ricini, 1 oz.
11 "	124	20	¼		
12 "	130	22	¼		No pain or tenderness—Not much tympanites.
Feb. 14th.					
1 A.M.	130	22	¼		Awake.
3 "	120	20	¼		Asleep.
4 "	104	20			Sleeping.
5 "	100	22			
6 "	118	24	¼		Slight tenderness—Milk still secreted.
8 "	120	24	¼		
9 "	146	24	⅜		
10 "	120	24	⅛		Tongue furred—Pupils contracted.
11 "	108	16			Sleeping.
12 M.	104	15			

Feb. 14th.	Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
			Gr.	Gtts.	
1 P.M.	124	18	¼		
2 "	120	18	¼		Tenderness and tympanites not marked.
3 "	126	16	¼		
4 "	120	19	¼		
5 "	132	30	¼		S. quiniæ, 2½ grs.—Sitting up—No pain.
6.30 "	120	18	¼		
7.30 "	120	20	⅛		
8.30 "	120	16			
10 "	120	18	¼		
11 "	116	14	¼		
11.30 "	112	16	¼		
Feb. 15th.					
1.30 A.M.	120	14	¼		
2.30 "	128	14	¼		
4 "	136	22	¼		
5 "	132	20			
7 "	132	16			
9 "	138	24	¼		S. quiniæ, 2½ grs. Pain and tympanites increased—Lochia scanty.
10.30 "	126	19	¼		
12 M.	132	20	⅜		
2.30 P.M.	140		½		
4 "	140	13		10	Pupils well contracted—Narcotized.
5 "	132	16	¼	10	
6 "	132	20	¼	10	
7.30 "	120	20	¼	10	
9 "	120	14	¼	10	
10.30 "	132	24	¼	12	
11.30 "	114	19	⅜	12	
12.30 "	120	18	⅛	12	
Feb. 16th.					
1.30 A.M.	108	12		12	Not much pain or tenderness.
2.30 "	108	19		12	
5 "	124	17		15	
7 "	118	20		15	S. quiniæ, 2½ grs. Pain in abdomen increased.
9.30 "	92	22			Belching—Some pain in right side of chest—Milk still secreted—Face pale, livid marks under eyes.
11 "	90	19	⅛		Hiccough and slight vomiting—Pain, on pressure, in iliac regions.
12 M.	66	18			Lochia returned—ceased during the night.
1.30 P M.	72	21			Pulse soft and full—Tongue clean.
3 "	76	24			
4.30 "	92	21	⅛		S. quiniæ, 2½ grs. Skin hot and dry.
6 "	100	18	⅜		
7 "	100	30	¼	10	
8 "	108	25	¼	10	
9 "	116	26	¼	15	
10 "	112	36	½	15	
11 "	112	28	½	15	
12 "	120	28	½	15	

FEB. 17th.	Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
			Gr.	Gtts.	
3 A.M.	120	30	½		S. quiniæ, 2½ grs. Tympanites increased, restless, wandering—Skin hot and dry.
4 “	108	28	¼		Pupils contracted.
5 “	100	24	¼		Still wandering—Pupils not so contracted—Turpentine stupe to abdomen.
6 “	120	36	½		Moaning—Respiration irregular ; restless.
6.30 “		24			
7 “	108	28	½		
8 “	110	20	⅛		Tossing about in bed ; moaning. S. quiniæ, 2½ grs.
9 “	102	24			Sleeping.
10.30 “	104	20			Sleeping more quietly ; countenance anxious ; lips livid.
11.30 “	112	19			½ oz. port wine every ½ hour.
12.40 “					Failing.
2 P.M.	152	21			Pupils contracted.
3 “	126	22			Lips livid—Face pinched—Pulse feeble—Sinking rapidly.
6 “	156	32	¼		
8.30 “	136	24			
10.30 “	136	30	⅛		
11 “	136	24	¼		
					Died on the morning of Feb. 18.

Autopsy—30 hours after death.—Body well nourished, half inch of fat in the mesian line.

Abdomen.—Contained about 12 oz. of serous fluid; large patches of yellowish lymph, among the convolutions of the intestines, and especially in the iliac fossæ. Peritoneum injected, principally when not pressed by the distended intestines.

Fallopian tubes, and broad ligaments, congested and dark.

Ovaries.—Mottled pink and white.

Bladder.—Empty.

Uterus.—Enveloped in lymph, flabby; pressed out into oval form by tympanitic intestines. Six and a half inches in long diameter, four and a half wide. A small patch of lymph in the os, where posterior lip was fissured.

Kidneys.—Congested. No marks of disease.

Stomach and intestines.—Tympanitic.

Diaphragm.—Covered with a layer of lymph below.

Liver.—Pushed up by tympanitic intestines.

Lungs.—Right pleura covered with patches of lymph. Left lung adherent throughout—no disease of lung tissue.

Heart.—Normal.

Pus was found in the uterine sinuses, in the fallopian tubes, and broad ligaments. Internal surface of uterus covered with a pasty, dark, grumous material.

Puerperal fever—Recovery.—Ann Nash, native of Ireland, domestic aged 27, multipara, was delivered of a healthy child, after an easy labor, Feb. 14, at 6 A.M. At evening visit, patient had a chill, followed by pain in the back and abdomen. There was also slight tympanites. Pulse 68. Lochia had not ceased. 8 P.M.—Pulse 96, resp. 20. Had another chill; pain and tenderness in the right iliac region; pain shooting through the back. Lochia normal; tongue furred. Bowels not opened. Skin hot and pungent. 9 P.M.—Pulse 104. Skin hot; complaining of pain in lower part of bowels. 9.30 P.M.—Pulse 126, resp. 55. S. morphiæ, gr. ¼. Pain and tenderness over abdomen. Turpentine stupe.

FEB. 14th.	Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
			Gr.	Gtts.	
10.30 P.M.	108	28			
11.15 "	120	26	½		
12.30 "	102	24			Sleeping—Belching wind.
Feb. 15th.					
1.30 A.M.	108	24	⅛		Perspiring—Decubitus dorsal—Knees drawn up.
2.30 "	124	24	¼		
5 "	120	26	¼	10	
8 "	116	22		10	S. quiniæ, 2½ grs. Tympanites increase—Tenderness very marked.
9.30 "	116	22	¼	10	Sleeping—Pupils contracted.
11 "	120	21	⅛	15	
1.30 P.M.	108	23	¼	15	Bowels moved freely at 13.30—Tympanites increased.
3 "	108	16	⅛		S. quiniæ, 2½ grs. Pupils contracted—Pain and tenderness increased.
4.30 "	102	22	¼		
6 "	102	20	⅛	15	Vomited a little.
7 "	100	18	⅛	10	Perspiring freely.
8.15 "	108	13		10	
9 "	120	18	⅛	15	
10 "	104	16	⅛	15	
11 "	104	16	⅛	15	
12 "	104	18	⅛	15	
Feb. 16th.					
3 A.M.	90	11		5	
4 "	90	16	⅛	5	
5 "	90	16	⅛	5	

FEB. 16th.		Pulse.	Respiration.	S. Morphiæ.	Tr. Ver. Viride.	SYMPTOMS AND RESULTS.
				Gr.	Gtts.	
6	A.M.	96	16	$\frac{1}{8}$	5	
7	"	106	25	$\frac{1}{8}$	5	No pain—Sitting up—Tympanitic still.
8	"	102	16	$\frac{1}{8}$	5	
9	"	96	18	$\frac{1}{8}$	5	
10.30	"	102	16	$\frac{1}{8}$	5	
11.30	"	102	16	$\frac{1}{8}$		
12.30	P.M.	94	20	$\frac{1}{8}$		Slight tenderness in hypogastric and right iliac region—Tympanites less—Lochia still.
3	"	102	12		5	S. quiniæ, 2½ grs.
5	"	108	24	$\frac{1}{8}$	5	
6	"	84	13			Feels much better—Transferred to Ward 8. Convalesced slowly. March 12th.—Up and doing well.

Puerperal convulsions—Recovery.—Mary Conners, native of Ireland, domestic, aged 24, married, primipara. Admitted to the hospital Feb. 1st, 1858. Patient is a large, stout, and plethoric woman. No history of previous disease could be obtained. During pregnancy she was troubled with vomiting and headache. On the night of February 14th, she came into the lying-in-ward in labor. Her pains were strong; at 12 P.M., she fancied men were standing about her. At 4 A.M., Feb. 15th, pains still strong; complained that she could not see. At 5 A.M., had her first convulsion; at 6, another, not very violent. Vaginal examination; os dilating; head presenting. Presentation L.O.A. Had no convulsion until 8; again a little before 9. Seen by Dr. Elliot 9 A.M., Feb. 14th, was bled ℥viij. from the arm; pulse fell to 80; somnolent; urine drawn with catheter, highly albuminous; os uteri dilatable; head advancing at 9½; fœtal heart beating in the left iliac region.

9.30. Chloroform, spasm presented; uterine pains continuing; convulsions 15 minutes after operation of bleeding was concluded; chloroform administered at 9.53; pulse 80; pupils very much contracted.

Delivered at 10.15. Child feeble; woman at the time unconscious.

10.30. A convulsion, lasting a few seconds; pulse 94.

Ordered by Dr. Elliot, visiting physician, 12 grs. hydrarg. sub. mur., mixed with butter, and four hours after ℥j. ol. ricini. C.C. No. iv. over each kidney. Convulsions to be anticipated if possible by chloroform. At ten minutes of 11, grinding teeth, and growing restless. Chloroform administered; again at 11; at 11.10, quiet; gave 12 grs. of calomel; conscious.

At 12.45 was suddenly convulsed; convulsion lasted but a few seconds. After convulsion passed off, was not as quiet as before, and in fifteen minutes growing more restless, administered chloroform; continued chloroform at intervals until after she was cupped at 1; C.C., No. iv., to each kidney.

1.10 P.M. Chloroform again, for beginning convulsions; quiet after it until 1.30, when becoming restless, chloroform was again given, until she became quiet.

At ten minutes of 2, becoming restless, grinding her teeth, rolling her head from side to side on the pillow, gave chloroform, and in a few minutes she again became quiet.

2.15. Awoke, said she felt cold, and was immediately convulsed; convulsion lasted about sixty seconds.

2.50. Slight spasmodic movements, chloroform again till quiet; pupils dilated during spasm; contracted subsequently.

3.10. Restless, chloroform till quiet.

3.45. Quiet.

3.53. After some restlessness, awoke, and had immediately another convulsion, which lasted for about twenty seconds; chloroform was administered, and at 3.55, is under its influence; strong stertorous breathing; pulse 96, rather soft.

4.10. Another slight convulsion; 4.15, apparently about to have another; chloroform till quiet; 4.20, chloroform again.

4.27. Noticing some twitching of the eyelids, immediately gave chloroform, but before she could be brought under its influence sufficiently, the spasm came on; pupils dilated. P. 116, gave chloroform after it.

4.40. Another convulsion, lasted but a few seconds, chloroform freely.

4.50. Pupils contracted; quiet under chloroform.

5.20. A very slight convulsion came on, no premonitory symptoms; pulse 96; pupils contracted after spasm; chloroform given; three more restless attacks controlled by chloroform, before 6.30; at 6, ℥j. ol. ricini was given.

6.50. Growing restless, chloroform again administered; spasm came on, lasting about sixty seconds.

7 P.M. Another convulsion, lasted forty seconds; pulse after it 110.

7.20. A violent convulsion, lasting about ninety seconds; pulse after it 160; soon after another, not as violent; pulse irregular, and intermittent after it; respiration 26; chloroform again given; two restless periods controlled at 8 P.M.

9 P.M. Restless, tossing from side to side; no convulsion; gave an injection of ol. ricini ℥ij., and 2 qts. warm water.

Visited by Drs. Elliot and Taylor; decided not to bleed; pulse contra-indicating; advised C.C. to back of neck, and chloroform continued.

9.30 p.m. Bowels moved freely after injection; C.C., No. iv., to back of neck; pulse 126, feeble; respiration 24; chloroform; quiet until 11.15, awoke, and had a violent convulsion, lasting a minute and a half; pulse after it 165.

11.30. Restless; chloroform again; bowels moved again.

Feb. 16th.—2.30 a.m., Has had no convulsion since 11.15, chloroform continued; pulse 100, feeble.

7.05. Restless; chloroform till quiet.

7.20. Restless; soon became quiet, sleeping; continued to sleep until 9.45, when awoke became restless; chloroform again.

10.30. Pulse 108; still quiet; at 11 restless; gave chloroform.

12 m. Awoke conscious for first time since first convulsion; put under chloroform again; urine drawn; not so highly albuminous; bowels again opened.

12.30. Asked for drink, went to sleep again; pulse 92, not so feeble; respiration 21.

3.40. Pulse 120, resp. 20, face flushed; some tenderness of abdomen.

4.30. Pulse 120, resp. 18, asleep; has taken some nourishment; complains of headache.

7 p.m. Restless; complaining that her sides feel sore; is conscious, answers questions readily; has no headache; beef tea.

8, p.m. Pulse 120, feeble; asleep.

Feb. 17th.—2.30 a.m. Pulse 108; awake.

3.30. Passed urine in large quantity; sleeps nearly all the time.

10.30. Awake; sensible; headache; lochia profuse; feels tired.

3, p.m. Pulse 108; skin natural; sleeps.

Feb. 18th.—9 a.m. Pulse 100; sensible; complains that her head feels heavy; wants to eat.

Feb. 19th.—Urine drawn and tested; albumen much diminished in quantity; Feels well; no pain; pulse feeble, not frequent.

Feb. 15th.—Urine highly albuminous; becoming almost solid by heat and nitric acid; under microscope no abnormal appearance; urates abundant.

Feb. 16th.—Urine not so highly albuminous; epithelial cells of kidney looked unhealthy; no nuclei seen; appeared slightly fatty.

Feb. 17th.—Still less albumen; pus cells, from lochial discharge.

Feb. 26th.—Very little albumen; abundance of urates.

March 2d.—But a slight trace of albumen; under microscope abundance of pus cells; no epithelial cells found.

(Presence of albumen from pus of lochial discharge?)

ART. VI.—*Report of One Hundred and Forty-two Cases of Fracture treated in Bellevue Hospital, New York.* By J. J. CAMPBELL, M.D., late House-Surgeon to Bellevue Hospital.

(Continued from page 406, Vol. 4, 3d Series.)

Patella—Number of Cases, 3.

Case 1.—J. G., aged 35, good constitution, was admitted for transverse fracture of the patella, caused, June 20th, by the kick of a horse. The separation of the upper from the lower fragment was fully an inch. Considerable inflammation of the knee-joint followed—but soon yielded to treatment. The limb was placed on an inclined plane flexing the thigh on the pelvis. The upper fragment was drawn down, and retained by a loop of adhesive plaster and bandages. When the limb was taken down, August 31st, good firm bony union was found. A small bony ridge remained to show the point of fracture.

Case 2.—E. M. C., aged 30, good constitution, was admitted with transverse fracture through the middle of the patella, caused, July 2d, by falling and striking violently on her knee while it was flexed. The fragments were separated more than an inch. Considerable inflammation of the joint followed, but soon subsided under treatment. The limb was placed on an inclined plane, etc., as in case one, but the fragments could not be closely approximated. The dressings were dispensed with Sept. 12th, and ligamentous union found. The ligament was nearly a half inch long.

Case 3.—P. M. G., aged 32, delicate constitution, was admitted for transverse re-fracture of the patella, caused, Jan. 19th, by falling and bending his knee violently and suddenly. The first fracture happened fourteen weeks before, and was caused by falling on his knee while it was flexed. He recovered from this fracture with ligamentous union in twelve weeks. In two weeks after this, he fell as above stated, and ruptured the newly formed ligament. He was treated like the two preceding cases for ten weeks, and recovered with a ligamentous connection a half inch long. While he remained in the hospital after his recovery, he could walk well enough on the level, but when he attempted to go up stairs, this limb had to follow the other, as he was unable to bend this knee.

Remarks.—Two of the cases were males, and one was a female. In the three cases, the fracture was on the left side. Two were the result of direct violence, and one of muscular action. In all the cases the fracture was transverse, and through the middle of the bone. They were all treated on the single inclined plane, keeping the limb flexed on the pelvis, to retain the triceps extensor cruris muscle of the thigh. The average duration of treatment was a little over sixty-nine days, although union had occurred much sooner than this. The average period at which they were permitted to move about was seventy-eight days. In one of the cases, there was good bony union, and in two the union was by a ligament half an inch long. The knee was a little stiff in all the cases, while they were in the hospital.

Tibia—Number of Cases, 6.

Case 1.—B. D., aged 60, pretty good constitution, was admitted for oblique fracture of the tibia, an inch and a half above the internal malleolus, caused, April 26th, by catching her foot in the carpet and twisting on it. Was treated in the starch apparatus until June 5th, when firm bony union without any deformity was found.

Case 2.—T. M. G., aged 28, good constitution, was admitted with compound comminuted fracture of the tibia in its middle, caused, Sept. 9th, by the kick of a horse. Was treated in a fracture box until union occurred. Was discharged soon afterwards (Nov. 19th), with firm union.

Case 3.—M. C., aged 32, good constitution, was admitted for fracture of the tibia, at the junction of the middle with the lower third, caused, Sept. 20th, by a kick. The limb was dressed with the starch apparatus two weeks after the accident. He was discharged well, Nov. 7th.

Case 4.—L. L., aged 39, good constitution, was admitted for transverse fracture of the tibia, three and a half inches above the internal malleolus, caused, Sept. 29th, by falling from a ladder, and striking on his tibia. The limb was placed on a double inclined plane. When discharged, Nov. 1st, there was good union and no deformity.

Case 5.—S. G. C., aged 45, robust constitution, was admitted for fracture of the internal malleolus, caused, Sept. 24th, by falling six feet, and twisting his foot under him. A wedge-shaped pad, extending from the knee to the external malleolus, with its base downwards, and a splint over it, extending below the foot, was secured to the outer aspect of the leg. The foot was kept firmly bound to the lower end of this splint. He was discharged well, without any deformity, and good use of the limb, Dec. 10th.

Case 6.—E. R., aged 39, good constitution, was admitted for oblique fracture in the lower third of the tibia, caused, Nov. 1st, by a blow with a bar of iron. Was treated on the double inclined plane until union occurred.

Remarks.—Out of the six cases, five were males and one was a female. The violence was direct in four instances, and indirect in two. in one case the fracture was in the middle third, in one at the junction of the middle with the lower third, and in four it was in the lower third. Three were oblique, one transverse, and one compound and comminuted. Two were treated with a starch bandage, two on a double Inclined plane, one in a fracture box, and one with Dupuytren's splint. The average duration of treatment was a little over forty-three days.

The longest sixty-one, and the shortest thirty days. Firm union occurred in all the cases. There was no deformity in three at least of the cases. The use of the limb was good in nearly all of the cases.

Fibula—Number of Cases, 7.

Case 1.—J. R., aged 22, good constitution, was admitted for oblique fracture of the fibula, an inch and a half above the malleolus, caused, May 24th, by slipping and twisting her foot under her. The starch bandage was applied on the fourth day, and when removed, June 26th, there was good union and no deformity.

Case 2.—P. D , aged 20, good constitution, was admitted for transverse fracture in the lower third of the fibula, caused, Nov. 3d, by jumping from a height, and twisting his foot under him. Was treated in a fracture box until union occurred.

Case 3.—H. G., aged 70, good constitution, was admitted with a fracture of the fibula in its lower third ; caused by a fall, Dec. 6th. A splint and wedge-shaped pad was placed on the inner side of the leg, and the foot bound to it, until union occurred, Dec. 30th. No deformity resulted.

Case 4.—N. U., aged 20, was admitted for fracture of fibula in its lower third, caused by a fall down stairs, Dec. 1st. A simple bandage, with rest in bed, was the only treatment. When discharged, Jan. 27th, the union was perfect without any deformity.

Case 5.—W. D., aged 45, good constitution, was admitted for fracture in the lower third of the fibula, complicated with rupture of the internal lateral ligament and luxation of the foot outwards, caused, Dec. 13th, by a fall. The foot was reduced, and the leg confined on a double inclined plane. When discharged, Jan. 22d, the union was good, and the use of the foot excellent.

Case 6.—S. S., aged 25, good constitution, was admitted for fracture through the external malleolus, caused, Jan. 13th, by a fall. The treatment was the same as in Case 3. Good union resulted in a month. She complained of some pain and stiffness in the joint for some some time after she commenced to walk about.

Case 7.—J. D., æt. 34, good constutition, was admitted for transverse fracture of the fibula, an inch and a half above the malleolus, caused, Feb. 9th, by a blow on the part. The leg was left in a fracture box for three weeks, and was afterwards confined to a splint as in Case 3. The union was completed in about ten days more. When discharged, March 28th, the union was firm, and the use of the foot good. Like the previous case, he complained of some pain when walking about.

Remarks.—Four out of six of the cases were males and two were females. Six were the result of indirect violence, and one of direct. They were all situated in the lower third; one was through the malleolus, and two an inch and a half above it. In five cases, in which the direction of the break was noted, three were oblique and two transverse. The starch bandage, the fracture box, double inclined plane, and Dupuytren's splint were the means employed in the treatment. The average duration of treatment was a little over thirty-one days in six of the cases. The union was good; no deformity resulted; and the use of the foot, etc., with but few exceptions, was excellent.

Tibia and Fibula—Number of Cases, 15.

Case 1.—P. K., aged 30 ; good constitution ; was admitted for compound fracture of the tibia, just above its lower third, and simple fracture of the fibula at the same joint, caused, March 2d, by a bank of earth falling upon his leg. The leg was placed in a fracture box for seven days, and evaporating lotions, etc., applied. March 9th, two splints, one on the outer and the other on the inner side of the leg, were applied, so as to keep the fractured surfaces in exact coaptation. It was soon found that abscesses were forming and burrowing in various directions. These were laid open, and the limb went on doing well. By April 13th, the openings in the soft parts were filled with granulations. By April 27th, the bones were so firmly united that the limb could be lifted from the bed by taking hold of the toes.

Case 2.—J. M. G., aged 67 ; good constitution ; was admitted with fracture of the tibia and fibula, in their upper third, caused, March 24th, by a fall. The leg was placed in a fracture box until April 1st, and then on a double inclined plane until May 6th, when union was formed, but very weak. A starch apparatus was then applied, and the patient allowed to leave his bed. He took his discharge May 15th. The result is not known.

Case 3.—T. A., aged 51; good constitution; was admitted for oblique fracture of the tibia and fibula, at the juncture of the lower with the middle third, caused, April 14th, by a fall. His leg was kept in a fracture box for thirty-six days, and then on a double inclined plane until June first, as the union was weak. A starch apparatus was then applied ; and when he was discharged, July 1st, the union was firm.

Case 4.—M. F., aged 59 ; good constitution ; was admitted for oblique fracture of the tibia, in the upper part of the lower third, and of the fibula, in the middle, caused, April 28th, by a blow on the leg that knocked him down. The leg was placed in a fracture box for a few days, and then on a double inclined plane, as deformity was threatening. In a few days more it was dressed with a starch bandage, as the deformity increased while on the double inclined plane. When discharged, June 13th, the union was firm ; no deformity remained, and the use of the leg was excellent.

Case 5.—J. W., aged 25 ; good constitution ; was admitted for compound oblique fracture of the tibia, just above the middle third, and of the fibula at a joint a little higher, caused, May 17th, by falling twenty-seven feet, and alighting on his feet. The lower portion of the tibia was pushed up among the muscles, behind the upper part of the bone. On the following day the lower part of the upper fragment was sawn off, and the parts placed in position in a fracture box. May 22d, the leg was put on a double inclined plane. May 26th, abscesses that were found burrowing among the muscles in various directions, were opened. The soft parts over the bone began to slough, accompanied by typhoid symptoms. Extra diet, brandy, tonics, and opium were given freely. The sloughing soon ceased, and he began to get better. Typhoid symptoms began again, and he commenced running down until July 12th, when he died.

On post-mortem examination, not the slightest trace of an attempt at union could be discovered. Extensive sinuses were found in all parts of the limb. The bone was increased in many places. The inter-articular cartilages were destroyed.

Case 6.—J. D., aged 30; good constitution; was admitted for compound fracture of the tibia, and simple fracture of the fibula, in their lower third, caused May 10th, by being struck on the part by a piece of rock from a blast. The leg was placed in a fracture box for fourteen days, and then on a double inclined plane for sixteen days more. From this time until June 17th a side splint, etc., was applied. Firm union had taken place in the meantime.

Case 7.—S. S., aged 20 ; constitution tainted with syphilis ; was admitted for oblique fracture of the tibia and fibula, in their middle third, caused, May 15th, by falling from a swing. Her leg was treated in the fracture box and the double inclined plane ; but no attempt at union was made until she was put upon an antisyphilitic course of treatment. When she was discharged, in August, there was firm union, and but very little deformity.

Case 8.—O. C., aged 50 ; good constitution ; was admitted with simple oblique fracture of the tibia and fibula, in their lower third, caused, May 20th, by slipping and striking his shin on the edge of a curbstone. The leg was placed on a double inclined plane until June 11th, when a side splint was applied. The union was good and firm June 26th.

Case 9.—C. A., aged 35 ; good constitution ; intemperate; was admitted for simple fracture of the tibia, and comminuted fracture of the fibula, caused, June 17th, by falling three stories, and striking on his leg. The leg was kept in a fracture box for the first six days, and then on a double inclined plane until good union had taken place. Sept. 1st, he limped some while walking.

Case 10.—J. R., aged 32 ; delicate constitution ; was admitted for refracture of the tibia and fibula, at the junction of the upper and middle thirds, caused, August 29th, by being kicked on the part and knocked down. This was the third time that these bones were broken, or the second time they were refractured, within nine months. Union occurred, and he was able to walk about in eleven weeks after the first fracture. A great deal of difficulty remained, as the fracture had been very oblique, and the lower fragment rode upwards. Two weeks after his recovery, he fell down on the sidewalk and refractured both bones. He recovered in twelve weeks so as to be able to get about again. The deformity still continued. Six weeks subsequent to his recovery, or August 29th, he again suffered a refracture, and came into the hospital for treatment. There was nearly a half an inch of shortening, caused by overriding of the lower portion of the tibia. The upper end of this portion of the bone was on a plane more than an inch higher than the upper fragment, and hence a large depression existed above it. A piece of adhesive plaster was attached to each side of the leg below the point of fracture, and formed a loop beneath the foot. The limb was then carefully bandaged and placed on a splint made with a wheel in the foot-piece, over which a cord played, attached at one end to the loop of plaster under the foot, and at the other to a weight. Good extension was kept up on the leg by means of this weight, and the amount of deformity was very much lessened. Compression was made over the prominence by means of a strip of adhesive plaster passed around the leg and splint. The extension was let up Sept. 28th, and the leg examined, when very good union was found, with but little deformity. A starch bandage was then applied as a means of safety against any chance of refracture. When discharged soon afterwards, he had good use of his legs and feet.

Case 11.—P. D., aged 38 ; delicate constitution ; was admitted for oblique fracture of the tibia in its middle, and of the fibula a little higher, caused, Sept. 28th, by the falling of a bank of earth on his leg. The leg was placed in a fracture box for the first week, and then on a double inclined plane until Dec. 1st, when good union had occurred. Two weeks after his admission, the fracture of the tibia was made compound by forcing the broken end of the lower fragment through the soft parts above it while he was in an epileptic convulsion.

Case 12.—J. J., aged 33, good constitution, was admitted for transverse fracture of the tibia, and oblique fracture of the fibula joint, above the malleoli, caused Dec. 12th, by falling with his leg bent under him. The limb was placed in a fracture box. When discharged, June 8th, the union was good, and no deformity remained.

Case 13.—J. D., aged 40, good constitution, was admitted for a fracture of both bones, just as in the preceding case, caused Dec. 7th, by a fall, and twisting his leg between a curbstone and a wagon. The leg was placed in a fracture box, but union was slow. He sustained a fracture of both bones at this point a year ago and recovered with deformity. When discharged, Feb. 25th, the union was good, but a good deal of deformity remained, and he could not walk without crutches.

Case 14.—W. O. B., aged 20, delicate constitution, was admitted with oblique fracture of the tibia and fibula in the upper third, caused Jan. 22d, by falling three stories and striking on her leg. This case presented the same tendency to deformity that Case 10 did, and was treated on the same splint. She was suffering at the time from profuse leucorrhœa. At the end of seven weeks, the limb was examined, but no union was found. She was then put upon wine in addition to her tonic treatment. At the end of three weeks more, pretty firm union, with but little deformity resulted.

Case 15.—J. B , aged 51, good constitution, was admitted for fracture of the tibia and fibula just above the malleoli, caused Feb. 4th, by slipping, and forcibly turning his foot outwards. The leg was kept in a fracture box for seven days, until all the inflammation had subsided, when it was put on a double inclined plane for fifteen days more, and then in a starch apparatus until good union had taken place.

Remarks.—Of these fifteen cases thirteen were males and two were females. Eight of them were caused by direct violence to the tibia at least, and all the rest, no doubt, by indirect. In two of the cases, the fracture was in the upper third, four in the middle third, one at the junction of the middle with the lower third, five in the lower third, three of which were immediately above the middle, and in one the fibula was broken in its middle, and the tibia in its lower third. Both bones together were fractured in eight instances. The fibula was broken transversely in one, and comminuted in the other. The fracture in the tibia was compound in three cases. In two cases, the fracture box alone was employed, and in ten of the remaining cases it was used for about a week in each case. The double inclined plane was employed in ten cases for a time; the extension splint that I got up, in two cases. The starch bandage was made use of part of the time in three cases. The average duration of treatment was fifty-two days. The shortest time twenty-five days, and the longest seventy-seven. The average period after the fracture until good union occurred, in ten cases, was a little over fifty-three days. The shortest time, twenty-seven, and the longest seventy-seven days. There was no deformity in two cases, very little in five, and a good deal in one. The use of the limb was pretty good in five, and imperfect in two.

General Remarks.—One case occurred during delivery, one on the sixteenth day after birth, four during the first period of ten years, nine during the second, thirty-three during the third, twenty-nine during the fourth, twenty-three during the fifth, eighteen during the sixth, eight during the seventh, and one at the seventy-fourth year.

Of one hundred and thirty-eight cases in which the sex was mentioned, one hundred and one were males and thirty-seven were females.

Of sixty-cases in which the side was mentioned, thirty-five occurred on the left, and thirty-one on the right. Fifty-seven cases were oblique in their direction, thirty-four transverse, five comminuted, five comminuted and compound, and seven compound.

Seventy-eight were the result of direct violence, and fifty-seven of indirect, including three cases caused by muscular action.

During	March	eleven	occurred,	Spring, thirty-two
"	April	thirteen	"	
"	May	eight	"	
"	June	six	"	Summer, twenty-five
"	July	six	"	
"	August	thirteen	"	
"	September	thirteen	"	Autumn, forty-three
"	October	twelve	"	
"	November	eighteen	"	
"	December	seventeen	"	Winter, forty-two
"	January	twelve	"	
"	February	thirteen	"	

ART. VII.—*Case of Poisoning by Arsenic from working in Scheele's Green. Coroner's Inquest and Verdicts.* By STEPHEN GRISWOLD, M.D., New York.

JAMES FITZGERALD, aged 12 years, 10 months, residing at No. 280 West Sixteenth street; a stout lad of good constitution, engaged at work in an establishment for the manufacture of paper-hangings; first complained of headache at 11 A.M., Tuesday, the 23d of March, and died on Thursday the 25th, at 8 A.M.—forty-five hours.

On the morning of his attack, he commenced working at about nine o'clock, in connection with two other lads, Thomas and William Trumbull, at "grounding" green paper, the color, as used, being composed of arsenite of copper, brought into a semi-fluid condition with water, or other liquid, and glue.

The process of grounding consists in spreading the color upon paper (covering the whole surface), and is performed upon a machine with a horizontal surface, over which the paper passes, the color being supplied from a box attached to the machine, and is spread on by rapidly revolving brushes. The paper thus grounded passes on, and is taken up and suspended for drying upon a "hanging" machine, by a boy introducing a stick at every eight yards. Thus suspended, it moves gradually on over steam pipes to a distance of about a hundred feet, in from twenty to thirty minutes, when it is dried and is reeled off by another boy. The especial business of the deceased on the day he took sick, was to stir up the color contained in a barrel, and supply it with a bucket and dipper to the box connected with the spreading machine. William Trumbull put in the sticks for suspending the paper, and Thomas reeled it off at the other end of the room. There were several others engaged in the same room upon similar machines, but using different colors.

With this premise, I proceed with the testimony, as adduced before Coroner Hills, and also with an account of the inquest.

March 25th, 1858.—Margaret Fitzgerald, being sworn, says: "I am mother of deceased. Day before yesterday, my James went to work as well as usual. About 12 o'clock he came home to dinner, and then complained of pain in the head. He gradually got worse. About six o'clock he became senseless, seeming to be in a deep sleep. The place where he worked was a paper-hanging manufactory. The doctor said he supposed it was from the effects of the green paint, used in the manufacturing of the paper, that was the cause of the death. He had been working there about eighteen months. He was always in good health until the time he was taken on Tuesday, excepting about Thanksgiving, when he had an attack of the small-pox."

March 26th, 1858.—E—— D—— (the foreman of the room), being sworn, says: "I was working in the same room with the deceased on the morning he took sick. I was exposed to all the fumes and vapors that arise from any of the paints and colors that were used at that time, as much as deceased. I was not made sick in the least from them, nor have I ever been affected *badly* from being exposed to them.

I have heard deceased cough very much for the last two weeks. At times he could scarcely speak, being choked, having so short breath." This affidavit was signed with his mark.

R. W., being sworn, says: "I am foreman at the establishment at . . . Knew deceased. His business was to supply colors to the paper boxes connected with the grounding machines. On the morning in which he took sick he was engaged in supplying the green color. He worked about two hours after this color was brought into the room, supplying colors to four machines, only one of them green. . . . There were eight or nine persons engaged at the same time in the room with him. All in the room were exposed to any smell or fumes that might arise from the colors as much as deceased was. *None of them were taken sick on that day or subsequently*, although we used the green color throughout the day till eight o'clock. Green paint, similar to that, has always been in use since I have been in the manufacture of paper-hangings, which is thirty years. I never saw any bad effects from its use, except occasionally an eruption of the skin. I never heard of a death following its use. The kind of business at which he was engaged does not expose the worker to any injurious effects that the paint may have, so much as those that mix it, or roll the paper after it is finished. I have frequently mixed the color, handling it freely, and exposing myself to it much more than deceased was, and have never had any injurious effects arise therefrom."

J. McM. . . . "I am a workman at the above-mentioned factory. I have been engaged in the business over four years. My occupation exposes me to any fumes that could arise from the coloring matter in question much more than the deceased was exposed. I have never been made sick from such exposure, and have never suffered any in connection therewith, *except when the color has remained on the skin, in which case sores have been produced.*"

Wooster Beach, M.D., residing at 92 West Twenty-sixth street, being sworn, says: "I made a post-mortem examination on the body now lying dead at No. 280 West Sixteenth street, March 26th [it was the 25th], about 3 o'clock P.M. The external appearance of the body indicated nothing unnatural. On opening into the thorax, the upper surface of the lungs appeared natural and healthy. On raising the left lung, the pleural cavity was found to contain about a quart of [colorless] liquor. The posterior surface of that lung was completely covered with soft false membrane, as was also the pleural surface of the diaphragm and the anterior surface of the posterior wall of the thorax. The posterior and inferior portion of the lung was intensely congested. The right lung was congested at its inferior portion. The other organs were healthy. From the appearance of the body and the history of the case, I am of opinion that death was caused by acute pleuritis."

Stephen Griswold, M.D., residing at No. 581 Hudson street, being sworn, says: "I first saw James Fitzgerald at No. 280 West Sixteenth street, on Tuesday the 23d inst., at about half-past eight P.M. I found him in bed, upon his back, in a partially comatose condition, writhing and twisting himself from side to side, but so prostrated in strength as to be unable to rise or sit up. His countenance presented a peculiarly pale, greyish appearance. His skin was cool, but his lips were cold and livid. His eyes were dim and glassy. He was constantly moaning—(a feeble moan.) When aroused, and asked a question, he seemed to but partially understand, and though he appeared to try to make some answer to questions, his answers were wholly unintelligible. After much effort, a hasty view of his tongue was obtained, which was clean, moist, and pale. His breathing was imperfect and irregular, being short and quick, and more slow and gasping, by turns. His pulse was very feeble and irregular ; for a second or two, it would be a succession of minute thrills, so small as to be scarcely perceived, and so rapid as not to be enumerated ; and then would follow two or three more perfect pulsations."

The following graphic narrative was received from his mother, whose language is now used, thus slightly varying the phraseology of this part of the statement as contained in the evidence upon the inquest. It simply renders the description more minute. She said: "My James left home this morning in good health and unusual spirits. At a little past twelve o'clock he returned with his cravat tied around his head. The dinner was ready, and he sat down to the table, but did not eat. I poured him out a bowl of coffee, which he took, and, resting his elbows on the table, drank it all off, and then rested his head upon his hands. I asked him why he did not eat, to which he replied, 'Don't you see, I am eating.' This was the first he had spoken. I then asked him what was the matter, and why he had his head tied up? To which he answered, 'The smell of the green paint made me sick.' He then got upon the bed and fell into a kind of doze. I got three cents' worth of senna and salts and made a tea of half of it, of which I gave him about a quarter of a tumblerful, when he was seized with vomiting. He vomited about a quart of greenish, bilious-looking fluid. I tried twice more to give him the senna and salts, but he vomited it up immediately ; so I laid him down, and he again became stupid. At about five o'clock I again got him upon the side of the bed—having to hold him up—with his feet in warm water, when he was again taken with vomiting without having drank anything ; and, finally, he fell back like a log of wood. I then went again to the apothecary, and he gave me some pills ; but when I returned, at about six o'clock, I could not open his mouth with a spoon. The last he spoke (that day) was when I soaked his feet, when he said, 'Mother, the green paint has killed me.' At first he complained all of the pain in his head ; but afterwards he complained some of pain under his arms."

To return to the testimony : "I also learned from his brother, that he first complained of pain in his head at about 11 A.M., and that at 9 A.M. he commenced working with the green paint, some of which I saw upon his nails.

"From 11 to 12 A. M. I was again with deceased. He continued in the same condition as at my previous visit, with the exception of a trifle more heat of skin, and the pulse the least degree more steady. Dr. Denison visited the patient with me.

"Wednesday, the 24th, 9 A.M.—Learned that from 2 till 4 A.M. he had been more quiet, having apparently slept; after which he had aroused with more consciousness. Found him less stupid, and able to answer questions by (a feeble) 'yes' and 'no.' He manifested pain, especially upon making pressure upon the lower portion of the sternum; and answered, 'No' when asked if his head ached. He had passed his urine, and purged, two or three times during the morning. His breathing was more regular, and about 40 to 50 inspirations to the minute. The pulse more steady, but still very feeble and variable, being about 120 to 130 to the minute.

"1½ P.M.—The patient again comatose and unable to speak, but was constantly moaning. His respiration had increased to 50 and upwards; the pulse to 130 and upwards, and was very irregular. Since morning, the abdomen had become distended and tympanitic. 4½ to 5½ P.M. Similar condition, but failing. Had had more purging, of which I found about two quarts of thin yellow feces by him, which had recently passed. Dr. Buck in consultation. 9 to 10 P.M. Failing; no more purging.

He had no cough from the beginning to the end of his illness.

"I am of opinion that the cause of death was from inhaling some acrid poison, which induced inflammation of the lungs, and prostrated the vital powers.

"Have visited the room where deceased worked. There was but little ventilation, and no draught. The heat and odor in the room was very oppressive, the temperature being probably upwards of 100 degrees."

The following testimony, by the same, was also subsequently taken, viz.: "That at my 4½ P.M. visit, on Thursday, there was shadowed forth in the skin a cloudy purpuric condition, which had been faintly perceptible during the afternoon, and was especially marked upon the anterior surfaces of the thighs; and that on Thursday morning, about two hours after death, it presented the same appearance, as it did also in the afternoon, when the post-mortem examination was made by Dr. Beach, when I called his attention to it. . . . That when that examination was held (seven to eight hours after death) the body was not yet cold. The stomach and intestines were inflated with gas, and apparently contained nothing else. The inside of the stomach was not examined, excepting a small surface turned out through a small opening in the anterior wall, which was of a pale color. The peritoneal surface of the abdominal viscera presented an unusually pearly appearance, with the exception of some small intestine lying posteriorly on the left side, which was streaked, of a pinkish color, and another portion, three to four inches long, lying near this, of a darker hue, and which was discovered by simply turning over the bowels, the examination not being very thorough. Neither kidneys nor bladder were examined."

The foregoing testimony, with the exception of that portion designated, having been taken in a very quiet manner by Dr. Beach, Coroner Hills arrived, administered the oaths to the witnesses that what they had subscribed to was correct, and empannelled a jury, consisting of the foreman of the block-cutting department in the paper-hanging manufactory, a police officer, and four other citizens, to whom he then hastily read the testimony, when objections were made to the proceedings by some of the jurors, on the ground that they had not seen the witnesses sworn, or heard them give their evidence, with an opportunity of questioning them. But these objections were overruled, and the case proceeded with.

Mr. C., the proprietor of the manufactory, made some statements, a portion of which were taken as testimony as follows: . . . "I have been engaged in this business twenty years. I have worked this particular color at which deceased worked on the day he took sick. I was in the same room (on the day in question), about three-fourths of an hour, watching the working of the color mostly. In my experience, I have never known any of the workmen affected *seriously* by it. In the *preparation* of the color—arsenite of copper—persons are sometimes by it. This is not done in our establishment, as we buy it ready for use. *No other persons who were at work in the room were affected at all*, nor have I ever known any *seriously* affected thereby. Men have worked this color, using their hands and arms in mixing it; one man mixing some tons without any injury, some two or three days at a time."

The room was now closed and the coroner left alone with the jury. After nearly an hour spent in argument and persuasion, four of the jurors were yet unable to believe with the coroner that the boy had come to his death by simple "pleurisy, and congestion of the lungs." *They* wanted to know what had *caused* the pleurisy and congestion, and therefore desired a chemical analysis, which, however, the coroner told them he would not have done. But they would not agree, so further proceeding in the case was adjourned till Sunday the 28th of March.

As it was apparent that an effort was being made to obtain a verdict that the deceased had come to his death from other cause than that of poisoning, and (I will quote the testimony)—"fearing the coroner would neglect a chemical analysis in the case, and wishing to have positive proof as to the poisoning, believing that it involved the peculiar question of the introduction of arsenic into the system by inhalation—on the morning following the death of the deceased, at the advice of Dr. Buck, after procuring the consent of the family of the deceased, in the presence of his uncle, I reopened the chest and took from the cavity of the left side thereof, a bottle of bloody serum," (a portion of the lung having been cut away at the post-mortem examination, blood had extravasated). "In another bottle was placed a portion of congested right lung, in another a portion of the heart, and small portions of intercostal muscle, and in another a small piece of muscle from the thigh. Portions of other organs would have also been taken but" (*fortunately*) "the uncle objected, and therefore were not." . . . . . "I also obtained from the manufactory a small bottle of coloring matter pointed out to me as an article similar to that in use by the deceased on the day he took sick. These materials, on the following morning, I delivered to Prof. St. John, at the College of Physicians and Surgeons for examination."

Sunday, March 28th, the inquest was proceeded with. Upon inquiry, information was obtained, that two lads, Thomas and William Turnbull, who had been at work upon the same color with deceased (and the only ones) had been affected thereby, and that they could not be persuaded to come forward to testify; which being stated to the coroner, he sent for, and produced them. He then also, sent for Dr. Buck.

A witness from the establishment was examined, but his testimony contains so many discrepancies as to render it wholly valueless for this publication. It is therefore passed by.

March 28th, 1858, Thomas Turnbull being sworn, says: "I worked in the same room with deceased. Last Tuesday he took sick in the forenoon, saying that he had a headache. I did not hear him complain of anything else than the headache. He complained of the headache at about eleven o'clock. We commenced working on the green color at about nine o'clock. Deceased put in the colors for four machines, only one of them green. My business was to reel off the paper at the other end of the room from the deceased. My nose was made sore so as to bleed. It bled in the shop on Wednesday; it also bled out of the shop—it bled at home on the next morning, and at night. I also spit blood; I coughed it up—it was phlegm, streaked with blood. I was not affected in any other way. Have worked in this establishment over three years. My work is reeling the paper after it is dried. I have worked at reeling over a year; before this I worked at different things. I worked at the same work that deceased worked at, but in connection with the printing-machine, which is in another room. I have worked at this green color four or five times in all since I have been there. I have reeled the green two or three times before this time. The only time I have been affected by my work was last Tuesday. Myself and brother and deceased and Mr. Devine were the only ones who worked at this color. Mr. Devine was foreman of the room. My brother was also affected; I do not know of any others being affected."

Question (by coroner). "Are you sure it was the green color that made your nose bleed?" *Answer.* "I think it was.

"The room is heated by steam pipes; the pipes are so hot I cannot bear my hand upon them. The paper in drying hangs quite close to the pipes—it touches in some places. Deceased had some cough—some time, four or five months. Sometimes he was very much choked. He coughed the same, in or out of the shop."

With reference to this cough, the mother has since stated that soon after getting out from the small-pox, he came home one night with a cold and cough, and that she soaked his feet and gave him some ipecac., and after that she heard no more of the cough. This is confirmed by several members of the family, and others who were in the habit of seeing him daily.

Gurdon Buck, M.D., residing No. 121 East Tenth street, being sworn, says: "I was requested on Wednesday afternoon, to visit a patient in Sixteenth street, with Dr. Griswold. I arrived there at about 5 P.M. I understood, by inquiry, that on the day previous, the patient went to his work as well as usual, and at noon came home sick, eating but little dinner. I was informed by his physician, that during Tuesday evening, he was in very much the same state as when I saw him. I found him in a stupid state, from which he could only be aroused with great difficulty, and could not answer intelligently. He was very restless, constantly tossing about. His countenance was of an ashy hue, the eyes having a dull expression; lips livid; breathing fifty respirations per minute, and upwards; pulse 130 to 140 and upwards. Heat of skin moderately increased. Tongue clean, pale and moist. The patient was very much prostrated. There was no cough. I was told that he had vomited some and had had moderate purging from the bowels without medicine. I understood that he had been exposed in his work to arsenic, which was in a color he had been using. I did not see the deceased afterwards. My inference was, that arsenic had been introduced into his system by breathing."

In answer to some questions by the coroner, with reference to the disease having been only pleurisy, and death having been caused by that, he said: "Persons are not attacked with, and do not die of pleurisy in that way."

Q. (by a Juror). "Had you been called to the deceased without any previous information of his exposure to arsenic, would you have given it as your opinion that that was the cause of his illness?"

A. "His symptoms were those produced by some powerfully acrid poison having entered into his system, and they corresponded to those of arsenic."

Q. (by the same Juror). "Have you attended cases of poisoning by arsenic before? And if so; were the symptoms the same as in this case?"

A. "I have attended persons who had taken arsenic for self-destruction. The symptoms in this case were the same, with this exception: in such cases there was more vomiting and purging; but in this case, the poison being introduced by inhalation, would explain the difference."

Q. (by another Juror; foreman of the "Block-cutting department" in the manufactory): "Do you believe, that in a room, at a temperature of a hundred degrees, where there were eight or nine persons at work, all of them exposed in the same way, to any fumes of arsenic that might arise, that one of them could be poisoned, and die, in forty-four hours, and none of the others be affected at all?"

A. "That is a thing that should be thoroughly sifted. And now, Mr. Coroner, I would ask you; have you had any chemical analysis made in this case?"

A. (of Coroner). "I—I—I don't know—I—I—directed it to be done, but have not heard—I expected it would be here."

Dr. Buck. "Well, that should have been done."

Dr. Buck was then handed a letter, which after perusing, he said:

"I am prepared to settle the whole question. I hold in my hand a letter to Dr. Griswold, stating that" (reads the letter)—

"Professor St. John, himself, examined the 'pleural fluid,' and in it clearly detected arsenic, as shown by Marsh's and Reinsch's test; also, by ammonio-nitrate of silver, and ammonio-sulphate of copper.' Having to go out of the city, he did not examine the other bottles, as sufficient proof was obtained from the analyzed fluid to put the matter beyond a doubt. The students applied the remaining corroborative tests, obtaining positive signs of the presence of arsenic.

Signed, "R. F. Weir."

Coroner. "That settles the question. That is proof positive."

William Turnbull, being sworn, says: "I worked in the same room with the deceased, putting in sticks. I was at work on green color, from 9 A. M. till night. My nose was made sore. It was sore on the next morning. It did not trouble me after Saturday. My nose bled. On the next morning my nose bled at the shop—it also bled at home. I was not sick in any other way. I have worked at the same color at other times, and it did not affect me at all."

Q. (by proprietor). "One time when you had a leisure moment, did deceased ask you to take a good sniff while he stirred up the paint, to make your nose sore quick?"

A. "Yes."

Q. (by the same). "Did you do it?"

A. "No."

Q. (also by the same). "Did deceased?" *A.* "Yes.

"The paint settles to the bottom, so that he has to stir it up when he dips it out."

March 28th, 1858.—John Hennisy (called by the proprietor), being sworn, says: "I work in the same factory as deceased, but in a different room—the curtain department. I attended the 'hanging-machine there, pulling in sticks. I have worked at this work on the green color, during the three years I have been there, seven times, I think, in all. The last time was two or three weeks at a time. I have not been sick from the effects of it at any time; I would have a rash, it would come under the arms extending to the sides of the chest, and also at the elbow-joints, and on the hands. My nose would swell a little, and break out with the rash, but not to bleed. I used to have my sleeves rolled up. I have never been affected in any other way. There was more surface to spread over than in the upper room where deceased worked. I think the upper room was the warmest. It was the same kind of color as used in the upper room, but stronger, I think, as it would cause the rash to come out sooner, causing it to come out in fine pimples, appearing on the nose first. The boys would often have a sore nose, sometimes in three or four days, and then again," (on the same one's) "in four or five days. I worked in the upper room, on the green, putting in sticks, two or three times, when it did not affect me at all. I never have known any one to quit work on account of its effects, unless it got into a sore."

Inquest adjourned to March 31st.

It is well to remark here, that it was stated by several of the witnesses, that the genitals are especially liable to be affected with the rash. I have since learned that the mouth is also made sore, affecting the gums and the edges of the tongue in particular. The feet and legs are also affected as I have been informed by a quite intelligent lad, who has himself been thus affected, and states that the above witness (Hennisy), was laid up for two weeks, at one time, from that cause. He says also, "I would get light-headed, so that sometimes I would feel as if I had no cap on, and would be looking for it when it would be on my head all the while."

March 31*st*, 1858.—Samuel St. John being sworn, says: "I am professor of chemistry at the College of Physicians and Surgeons. On Saturday last, I received from Dr. Griswold a bottle of bloody fluid, a portion of lung, a portion of heart, and a portion of muscle, requesting me to analyze them for arsenic; also at the same time, and by the same individual, a vial containing a greenish fluid. I examined the bloody fluid first, and obtained unmistakable evidences of the presence of arsenic. The quantity was very minute, much less than I have been accustomed to find in stomachs where arsenic had been taken. On Monday I examined the portions of lung and heart; I found less, yet decisive evidences of arsenious acid. In the portion of muscle I did not find enough to speak of, if any. The portion was very small, and the examination upon the whole unsatisfactory. The green fluid I also tested, and in this way: upon standing, the green had settled to the bottom leaving a colorless fluid at the top, which I decanted off and tested, and found abundant evidences of arsenious acid."

"Arsenious acid is capable of detection in exceedingly minute quantities. Arsenious acid may be absorbed in small quantities. I believe there is more or less arsenious acid mixed with the arsenite of copper as an adulteration, which appeared to be the case with the specimen analyzed by me. I think but very little arsenious acid would be held, or carried in vapor of water. In this particular case, from what I have heard stated here [a portion of evidence of the next witness], I should think the poison was absorbed by contact, the offending matter being the adulteration and not the coloring matter. I should not think that arseniureted hydrogen could be found in any of the processes of manufacturing and its use, as I have heard detailed here. I should not think that the quantity of arsenious acid in the body would have caused death by itself, in a healthy system. The quantity of arsenious acid found, was a very small portion of a grain. I did not go into any analysis for quantity, and therefore cannot make any estimate how much there may have been in the body."

R. S being sworn, says: "I work at the Union coloring works, No. 401, 403, 405, Cherry street. I am the manager of the establishment, and the manufacturer of the colors made by us. The light green, as it is called, we make, using blue vitriol, sal soda, and vinegar, and sometimes sulphate of iron. In this there is no arsenic. We also make another green in which arsenic enters, using blue vitriol, arsenic, sal soda, and vinegar. I have furnished the proprietors of the establishment in question with the green colors. I do not know as I furnish all of the green colors; I have been engaged in the manufacturing of colors 11 years. I have not known any injurious effects from these colors to those employed in making them. I prepare the colors myself. We sell it in a pulp state. I presume, that which was in use when deceased took sick, came from our place, as I am told it was in a pulp state. We make 1,600 pounds from day to day, of the green, or that which contains arsenic." On being asked to describe the process of manufacturing, he said : "The arsenic and vinegar and hot water are put into one large tub, and in another the sal soda is dissolved with hot water. Then the contents of one tub is allowed to run into the other, when it fills the whole building with steam. This is pure steam, it will not hurt anybody ; we breathe it freely. Then, when it settles, all of the arsenic goes to the bottom with the copper, but there will be a green liquor at the top which contains no arsenic. This liquor we draw off and get it into a pulp state—that is a thicker state—by a process which is a secret. This article we furnish to paper-hanging manufacturers. We have furnished some of this to —— (the proprietors of the establishment in question), and I suppose it is the same as in use by the deceased, as I am told it was in a pulp state. . . . When we have got this green in a pulp (the arsenite of copper which has settled to the bottom) we take it into another room which is very hot, and tight, and place it on hot copper tables, heated by steam, for drying. The heat of the room is 190°. Our men go in there every two hours, and stay one hour stirring it up and turning it over freely. Our men feel no other effects from it than weakness from sweat. The room will be filled with steam and dust. We cannot get the room tight enough to keep the steam in. After it is dried, we take it into another room and grind it in a mill, which makes a great deal of dust. We cannot keep the dust in, it will go all over, covering everything in the office with a green dust. We do not furnish this to paper stainers. I know a medicine that will cure persons if they are made sick by this color." *Question* : "Do you keep this medicine on hand?" *Ans.* "We do." *Q.* "What is it?" *A.* "Well, I take some sulphate of iron, and a little oil of vitriol with water, and give them." *Q.* "Will the pulp you have spoken of, prepared from the green liquor, dissolve freely with water, and remain so without settling to the bottom?" *A.* "It will."

James R. Chilton, residing 125 Fifth Avenue, being sworn, says : "I am an analytical chemist. I have analyzed a portion of lung, a portion of intestine, and some bloody fluid which was brought me yesterday, by Dr. Hassel. My analysis was to determine whether these contained arsenic. I tried each of the substances separately and carefully, without detecting any arsenic, by the most delicate tests. . . .

"Scheele's green, which is the arsenite of copper, and chrome green, which contains no arsenic, are the green colors mostly used by manufacturers of stained paper. Arsenite of copper will not decompose only at a high degree of heat. It is made at 212° F. Arsenite of copper would only be decomposed by free hydrogen, if such should be gene rated in any way in its use, and I do not see how this could take place in its use by the paper manufacturers. I have long been acquainted with the manufacture of these green colors, and have never known any ill effects except with sores or a rash, which arise from local application, not affecting the system generally. It is chemically impossible for Scheele's green to be decomposed at a temperature of 100° F. There may be arsenious acid mixed with the arsenite of copper; yet were it half arsenic, it would not make any difference in the effects, as the arsenic is only thrown off at a high degree of heat, considerably above 212°. At 69° water will hold about 9 grains of arsenic in solution to the ounce, at 212°, some 69 grains. I do not think that in the process of drying, any arsenic would be carried off in the steam."

The following was handed to the coroner:

Wooster Beach, M.D., being recalled, says: "I took a portion of lung, and a small piece of intestine, from the body of James Fitzpatrick, and some blood that exuded from said lung, to my place of business, where they remained until day before yesterday. At that time I sent the blood and some portion of the lung with the piece of intestine to Dr. Chilton. I retained some of the lung, which I boiled for about three hours in water, after which I filtered the fluid obtained, and subjected it to two tests for arsenic. In neither way did I detect the presence of that metal. In the different tests employed by me, one was the insertion of a piece of copper in the suspected fluid, acidulated with hydrochloric acid and boiled. Another was Marsh's test." The inquest now adjourned till Friday.

Not dreaming but that the identity or original purity of the portions analyzed by Dr. Chilton, would be established by proof, it was felt that I was somewhat saddled with the arsenic that Prof. St. John had found. Indeed, not very careful insinuations pointing in that direction, had been made by the proprieter of the establishment; and his foreman of the block-cutting department, who, acting as juror, and at all times stating what he knew in the case, had put several questions to witnesses involving the same inference. Under these circumstances there was but one course to pursue, or be crushed, which I firmly believe was the intention from the beginning, should it be necessary, for it was thought, and so stated at the inquest, in a speech before the jury, by the proprietor, that . . . "his whole business was at stake, a business that he had been engaged in for twenty years, a business by which he had been able to keep in employ 150 men and poor boys during this whole winter, when he was scarcely selling a bundle of paper. He had fed the poor, and clothed the orphan. Would he be engaged in a business that was dangerous to his workmen? No! if this was established he would quit it at once." However true any, or all of these statements may have been, I simply could not afford to have my reputation as a physician, or my honor as a man tarnished by such insinuations; therefore the body must be disinterred, and new and undisturbed portions taken by trusty and disinterested parties, and another analysis made. The consent of the family of the deceased was obtained, and the services of his uncle for identification of the body, and of Drs. Tucker and

Furman, to select from it such portions as they should think proper, and take them directly to Prof. St. John, for analysis; the result of which is to follow.

Friday, April 2d, 1858.—Inquest proceeded with—all of the witnesses connected with the last chemical analysis present—the coroner was loth to take their testimony, but finally, after some argument, concluded to take a brief statement.

Samuel St. John, M.D., being recalled, said: "On Thursday, at half-past five P.M., I received from the hands of Drs. C. P. Tucker and Guido Furman, the following portions of the body of deceased: a large portion of the liver with the gall-bladder attached, portions of the heart and lung, the spleen, both kidneys, a portion of intestine (descending colon) and two bottles of fluid, one from the cavity of the chest, the other from the cavity of the pelvis. I proceeded immediately to analyze. The solid portions were brought into solution by boiling with dilute muriatic acid. I then filtered, and proceeded to apply the tests. The liver gave me sensitive portions of arsenic. The kidney gave the same results; the intestine gave similar results to the kidney. The fluid obtained from the heart responded less satisfactorily to the tests; from the spleen I obtained no evidences of arsenic. I have named the above results in the order of the quantities found, as near as possible. Both of the fluids responded feebly to the tests."

Drs. C. P. Tucker and Guido Furman being sworn, say: "On the afternoon of April 1st, we had the body said to be that of James Fitzgerald, exhumed, and took therefrom, and delivered in the same condition as taken to Prof. St. John, the portions designated by him. The liver and kidneys had not, from appearances, been disturbed by any previous examination."

The bladder was found by them perfectly empty.

Thos. Hearn being sworn, says: "I am uncle to the deceased, James Fitzgerald. His body was exhumed yesterday afternoon, and portions taken therefrom by the two last witnesses."

Augustus C. Booram, was then called by the proprietor, and being sworn, says: "I saw deceased on Wednesday, the 24th, about noon. I found him laboring under very great difficulty of breathing, rapid respiration, small frequent pulse, tongue pale, somewhat coated—his mother said that his countenance was about natural—somewhat anxious, restless, partially comatose, but could speak plain and intelligently. He complained of great pain in his chest; these were the symptoms. He seemed very ill—very sick. I applied my ear to the chest, hearing crepitation distinctly. The eye seemed sunken, the pupil natural. I was also present at the post-mortem examination; we found a large quantity of colorless fluid in the left cavity of the chest, near a quart. The pleura was found very much inflamed. There was adhesion (it could hardly be called so) and large quantities of (very soft) false membrane. There was considerable congestion of one lung at the posterior part. We found no other disease. The liver (peritoneal surface) seemed paler than natural. I considered deceased to be laboring under congestion of the lungs, connected with pleuritic affection. The The post-mortem showed more disease than what I expected to find. I believe death to have been caused by pleurisy and congestion of the lungs. When I saw deceased before death, I did not think his sickness was from poison, but from congestion of the lungs. I saw the patient at the request of —— (the proprietor)."

It will be observed that this witness saw the patient during the rallying period.

Dr. Dennison, who was present, and had been with the deceased from 11 till 12 p.m., on the first day of his illness, was now offered, but the coroner refused, saying that "he could not take any more evidence on that side. We had had Dr. Buck, and he had admitted Dr. Booram's evidence on the other side, considering it as only a fair offset —one physician on each side!" A very striking illustration of the manner in which the inquest had been conducted; for in reality it was a contest between sanitary science and the green paper interest and its ramifications. "He had admitted the evidence upon the last chemical analysis to satisfy us, because the case had assumed such a condition that a question of veracity and character seemed to be involved. He must close the case." He then charged the jury, and "assured" them that, "though Dr. Hassell had not appeared to testify to it, the portions analyzed by Dr. Chilton were portions of the deceased. But taking it as established that arsenic had been found in the body, it was unnecessary to take that into consideration in rendering a verdict, as, by the weight of the medical testimony, death was caused by disease of the lungs." He called their attention to the previous cough, the small quantity of arsenic found—though no analysis for quantity was made, and which he refused to charge—and the comparative impunity with which others had been engaged in the work (upon which he laid particular stress), and recommended them to bring in that kind of a verdict. The room was then cleared of all but coroner and jury, when he further insisted (as I have been informed) upon the same kind of a verdict, and absolutely stated that he would not accept any other, or one that connected the death with poisoning. But four of the jurors could not concur with him and the other two, and they were therefore discharged. *Yes, only the four* were discharged, or if the other two were also, then they were called to act again in the same case, for in following the result to the City Inspector's Office—inquest No. 376, for March—may be found the following verdict, rendered April 9th, 1858:

"*Verdict.*—That the said James Fitzgerald came to his death by pleurisy and congestion of the lungs: but from what cause excited the jury cannot say." Signed

"Christopher Robley [*foreman of the block-cutting department in the paper-hanging manufactory*]. } Former jurors.
"Robert Humphreys [*police-officer*].
"James Crosby.
"Christopher Hogan."

Also the following, viz.:—"The undersigned jurors further believe that his disease was aggravated by the arsenic found in his system.

Signed "Nicholas Walsh,
"John Fitzpatrick."

This latter will be found upon a separate slip of paper in the writing of the coroner, showing that it was probably drawn by him, as was the case on the two previous occasions, when he drew up a verdict of "pleurisy and congestion of the lungs," and asked the jurors to sign it, presenting it especially to Mr. Robley (though he was not the foreman of the jury) for approval.

But to cap the climax of this strangely conducted inquest, we have Dr. Hassell's tardy statement, which will perhaps solve the mystery of Dr. Chilton's finding no arsenic.

Ebn. Hassell, M.D., residing at 71 West Thirty-seventh street, being sworn, says: "On Monday, the 29th ult. I received a portion of intestine, of lung, and some blood, from Dr. Wooster Beach, jr., for the purpose of procuring an analysis of the same. I took them to Dr. James R. Chilton, who promised to make the analysis. I know that the lung, etc., were the same as brought to my place by Dr. Beach, on the 25th ult. The lung and intestine were thrown into a Croton-water basin shortly after they were brought in. The blood remained in the bowl in which it was brought, all the time, until poured into a vial to carry to Dr. Chilton.

"Taken, 9th April, 1858"—the day on which the verdicts were rendered.

It is to be regretted, that the doctor has failed to state what quantity of water flowed over these portions during the four days they were in the "Croton-water basin" in his and Dr. Beach's apothecary shop. As for the "blood that remained in the bowl in which it was brought, all the time, until poured into a vial to carry to Dr. Chilton," and which Dr. Beach describes as, "came from the lung;" the inference is, that it was what adhered to the bowl after emptying its contents, and that the quantity was small, by its being contained in a vial—"a small vial," as described by Dr. Chilton. It is worthy of remark, also, in this connection, that a portion of the lung taken, was pretty well washed at the time it was taken from the body, by being immersed in a bucket of water, to teach us that congested lung would sink, and that, at our suggestion, another portion was also taken that had not been washed; and I will further say, that it was just such proceedings as this, that occasioned the fear that no *proper* analysis, if any, would be had by those whose official business it was to secure its being made. When the difficulties encountered in establishing the presence of arsenic in the body is taken into consideration, it will be apparent why more exact information as to the particular form, manner, and circumstances of its introduction could not be obtained, and the reasons why those engaged upon different parts of the work were not equally affected; but that arsenic was introduced into the system of the deceased, during the three hours he was engaged at his work, cannot be doubted; and the route through which it entered is also pretty clearly indicated.

As for the propriety and legality of such a system of conducting coroner's inquests as was manifested on this occasion, I have nothing to say at this time.

PART SECOND

CRITICAL ANALYSIS.

Art. VIII.—*The Institutes of Medicine.* By Martyn Paine, A.M., M.D., N. Y., 1858, pp. 1095.

Essays on the Secretory and the Excito-Secretory System of Nerves, etc. By Henry H. Campbell, A.M., M.D., Phil., 1857, pp. 135.

We notice these works together, for reasons which will appear in the sequel. It is well known to our readers that to the above essay of Dr. Campbell, the prize of $100 was awarded by the American Medical Association, in May 1857, and that chiefly, it is understood, on the alleged ground that the author has made a most important physiological "discovery," viz : of an "excito-secretory system of nerves," and corresponding function ; which is supposed to furnish a correct interpretation of many physiological phenomena, and elucidate may pathological conditions, which formerly were not well understood. This claim of the author, as it seems to us, and as will be made to appear hereafter, has been conceded in some quarters, on very slight and insufficient grounds, and with, as it would seem, a total oversight of what has been accomplished by others, and a very imperfect knowledge of the present state of this branch of physiological science.

The influence of the nervous system on the functions of other parts, is one of the most interesting, as it is one of the most ancient subjects of inquiry in medical science. Dr. Bostock has truly remarked, that a great part of the sciences of medicine and pathology consists in tracing the operation of this nervous connection between the different parts of the body, and observing the effects which are propagated to distant organs or functions by the affection of any single organ or function. It may be assumed as a demonstrated principle, we suppose, that this connection is not of that kind which we may denominate *physical*, where the change is extended to remote places in consequence of an alteration in the mechanical constituents of the body, but is to be referred to that sympathetic connection between the parts, which can be accounted for upon no other principle but the operation of the nervous agency. There are many and great difficulties connected with such inquiries. Some, owing to the very nature of the subject, and others to faulty methods of investigation. When we consider the intricacy and minuteness of structure of the nervous system, so minute as to baffle the eye of the anatomist, its ramifications extending everywhere, permeating every part, decussating and interlacing everywhere ; and then, when we observe how prone we all are to generalize our knowledge, by applying principles with which we are familiar to the explanation of new facts, regardless whether the analogy between them be such as to warrant such extension—when we consider all this, we need not wonder that the subject of the nervous function is still involved in mystery, and that the laws which regulate it are yet, perhaps, but imperfectly understood. Here is a subject, vast and recondite enough to occupy the human faculties till the end of time, and then leave extensive fields uncultivated, if not unexplored!

The nervous system not only brings the conscious mind into relation with the external world, through the medium of the organs of the senses, but it is also intimately connected with all the functions of the living body, in health and disease. What is this connection, and how and in what degree it influences them, are problems which many have attempted to solve; some, like Marshall Hall, with marked success; others, from affected knowledge and ill-constituted minds, have only succeeded in displaying their own ignorance, and involving the subject in still greater darkness. It is a grand and sublime problem to determine the extent to which purely *mental acts* are concerned in the production of bodily changes, and through what instruments their influence is communicated. Another problem, as connected with the organic functions of life, is almost of equal importance, viz.: what are the functions of the *sympathetic* or *ganglionic* system of nerves. Again, in what do *functional alterations* of the nervous system consist, since they are of a kind beyond the ken of even microscopic research? Do we know anything as yet of the nature of nervous influence? Is it within the scope of the human faculties? Can we even know anything more than the phenomena which come within the range of our observation, and the mechanism through which these phenomena are brought about? If we cannot learn the nature of vital or nervous energy, can we not learn the conditions essential to its various operations, as well as the operations themselves. But how are these to be learned? Certainly in part, at least, by studying the properties of the organs which it immediately influences, and this is the plan which the author of the "*Commentaries*" and the "*Institutes*" has everywhere pursued, and which has enabled him to build up the most complete, perfect, and rational system of nervology yet given to the world—a system consistent with and reconciling all known facts and phenomena; harmonious in all its parts; and throwing equal light on physiology, pathology, and therapeutics. This, we doubt not, will be deemed extravagant praise by some, but it will be borne out by a candid examination, and sustained by the award of posterity.

Dr. Paine has entered far more extensively into an analysis of the *vital properties* than any other writer, while, at the same time, he has set forth highly original views as to the character and office of the nervous power, and as to the mode in which this power participates in the operation of remedial and morbific agents, and moreover, clearly shows, that in proportion as philosophy departs from the deductions which are founded on the phenomena of living beings, in the same ratio must it be fundamentally false, and the unavoidable cause of practical errors of the highest moment.

Vitalism, so called, lies at the foundation of all his writings. He believes it to be founded in nature, "because it is consistent throughout; because it seeks no multiplication of causes, but serves as an impregnable and universal foundation for every fact and every rational principle in physiology, pathology, and therapeutics;" and therefore uniting all the principles relative to life, health, disease, and the art of medicine, into one concentaneous, harmonious whole. Our author does not undertake to investigate the nature of the vital principle, being satisfied with demonstrating its existence, and showing that organic beings are governed by laws peculiar to themselves.

We are, however, more particularly concerned at present in inquiring whether Dr. Paine has recognized an "*excito-secretory function*" (which is now claimed by several as a new "discovery" on their part), and how far this enters into his theory of the functions as connected with the causation of disease and the *modus operandi* of remedies. We believe that a very superficial examination of the "Institutes" will satisfy the reader that our author not only recognizes such a function, but that it lies at the foundation of his whole system, and enters largely into all his explanations regarding the operations of the healthy functions, the causation of disease, and the operation of medicines. To make this appear, we shall have to quote somewhat largely from the "*Institutes*," and from the essay "*On the Modus Operandi of Remedies*," published as early as 1842.

We may premise, however, by presenting the claims of Dr. Campbell, which have, as we have stated, been allowed by Marshall Hall. The first thirty pages of the essay is occupied with an account of the anatomy and well-known functions of the two grand divisions of the nervous system, the cerebro-spinal and the sympathetic, as presented in all our standard works on physiology. Indeed in this part there are no statements made but what are perfectly familiar to all who have perused any recent treatise on this branch of science. In the second portion of the work (p. 94) the alleged discovery of Dr. C. is thus set forth:

"The cerebro-spinal system has been subdivided into two portions, viz., the nerves of sensation and those presiding over muscular action. A *relation* has been discovered to subsist between these two portions of the nervous system, by virtue of which the sensory nerves have been found to act as excitors to the motory; and hence this system has been termed by Dr. Marshall Hall the *excito-motory* system of nerves. Now, as we hope more fully to set forth in the present discussion, these same sensory nerves are not only excitory to the *motory* system, but, under certain circumstances, most of them sustain an analogous relation to the *secretory* nerves, exciting them and modifying their action, diminishing, increasing, and altering the secretions, according to the extent and character of the excitation applied. It will be our object, then, to show that the sensory nerves, or, at least, some of them, sustain to the other two portions of the nervous system a *double* relation; first, excitors to the motory system, giving rise to the excito-motory system, ascribed by Dr. Marshall Hall in 1837; and, secondly, excitors to the *secretory* system, resulting in the *secretory system*, enunciated first in this country in 1850, and which second system Dr. Marshall Hall did not appear anywhere to recognize until the present year" (1857).

The writer then, in establishing the proposition of the excito-secretory function of the nervous system, refers to the influence of cold to the surface over the urinary secretion. Rejecting the hypothesis of an antagonism existing between the cutaneous surface and the secretory surfaces of the kidney, or the bowels, Dr. C. gives *reflex action* as the true explanation.

"We irritate an excitor nerve," he remarks, "and we stimulate muscular contractions, evidencing the existence of the excito-motory function. The excitor, or sensitive nerves, having received an appropriate stimulus, excite, through the medium of the spinal centres, the action of those gangliæ and filaments dominating the secretory organs in question; they control, as we have seen, their circulation; they preside over their secretion; and thus stimulated, they are excited to modify the circulation and the secretions. So far this is a normal act, the result of that ordained and wholesome commodation established between these two portions of the organism through these two systems of nerves —the sensory and the secretory; but should the excitation be unusually strong, amounting to what is properly termed a 'shock,' or too prolonged, we find the secretory system acting unduly; and this action is then carried to an abnormal extent; the *dynamic* act so modifies the circulation that secretion becomes aberrated, or even arrested, and perhaps a change in the condition of the tissue, from altered nutrition, may result. Dr. Marshall Hall thus remarks upon this subject: 'A partial, keen current of air falling on *any* susceptible portion of the skin may induce inflammation in any susceptible internal organ. An extensive burn or scald is apt to induce pneumonia.'"

This explanation the writer claims as original with himself; for he says (p. 96): "It is in this way, then, viz., by the doctrine of the excito-secretory function of the nerves, that the above familiar, though, *until a few years past, mysterious phenomena, have received their interpretation.*"

In order to illustrate the theory of excito-secretory action still further, Dr. C. selects the *fifth* pair of nerves, which has extensive connections with the ganglionic system, which is distributed to parts endowed with exquisite sensibility, and originates from that portion of the cerebro-spinal axis, which exercises a more extensive influence over the vital processes of the organism than any other one portion, viz., the medulla oblongata. The first illustration is drawn from the influence exerted on the conjunctional surface of the globe, by a draft of cold air, or a mechanical irritant, occasioning, first, an increase of the secretions, and secondly, congestion and inflammation. The explanation, of course, is, that the branch of the fifth nerve distributed to the eye, becomes excitor through the spinal centre, to the modifications in the circulation, secretion, and nutrition of the eye-ball, which acts are under the immediate reign of the ganglionic system, fauces, affections of the nostrils, pharynx, etc., are illustrated on the same principle. Diseases of the eye caused by dental irritation, are also specified as belonging to the same category. The influence of dentition in producing spasms and convulsions, bowel affection, cutaneous diseases, etc., is explained in the same way, accompanied by the following remark :

"Now, for these concomitants of dentition" (above named) "*there had never been presented any rational and satisfactory explanation, until they were referred to as illustrating the doctrine of excito-secretory action in* 1850."

In noticing the influence of dentition over the urinary secretion, Dr. Campbell refers to the origin of the trunk of the fifth, or tri-facial nerve, *beneath the floor of the fourth ventricle*, as traced by Dr. Alcock,* and confirmed by Soemering, and then, in connection, quotes the well-known experiment of Bernard, viz., inducing *artificial diabetes*; an exaggeration of the hepatic (saccharine) and the renal secretions, by pricking the floor of the fourth ventricle, from which we have seen the fifth pair of nerves originates; thus proving experimentally, that irritation of a spinal centre is competent to excite and to modify the secretory function of the abdominal viscera—"This fact," says Dr. C., "thus proved in *experiment* by M. Claude Bernard, *the records of American medicine will show, was recognized and announced from observation* in June, 1850. In M. Bernard's *experimental* investigation, the irritation was directly applied to the nervous centre ; in the induction from *observation, peripheral* irritation through the dental branches of the fifth nerve was recognized as competent to excite the secretion, and modify the products of secretion—the *observation* here, and not the more recent *experiment*, was the real parent of the principle of *excito-secretion*."—(p. 105.)

Dr. C only alludes to one more set of pathological phenomena, as peculiarly illustrative of the excito-secretory function of the nervous system, viz., the aberrations of secretion so often found connected with attacks of *hysteria*, such as limpid urine, profuse sweats, and salivation ; all these include *all* the facts, observations and illustrations of a pathological kind which are brought to sustain the doctrine.

Now, we are not disposed to deny that Dr. Campbell believes he has discovered an important function, one not hitherto known to physiologists ; we are not inclined to dispute his claim to the merit of being a sincere and ardent cultivator of medical science, and an accurate observer of disease, but when we are asked to recognize him as the discoverer of a "new system of nerves," or a new function, we must be excused; indeed, we might admit his claim to priority over all others, but only so far as his information extends, but then we must insist that his information seems very limited. So far as there is any merit in the name "excito-secretory system of nerves," we are willing to give Dr. C. the credit of it, but then we should insist that the term is a misnomer, and that it conveys an erroneous idea, inasmuch as it does not at all regard the *depressing* and *alterative* influences of reflex action, so clearly and fully elucidated by Prof. Paine. The examples presented by

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* *Cyclopædia of Anatomy and Physiology.*

Dr. C., and referred to above, are either the same, or slight variations of those given by Dr. P., while the latter are of every variety and shape, and carried into all physiology, pathology, and therapeutics. The former, we hesitate not to say, has not a single statement relative to the different orders of nerves, and of the relations of the cerebro-spinal to the ganglionic system, which are not much more distinctly and amply set forth in the "Institutes." There is nowhere to be found in medical literature, nor in all medical works extant put together, so full, so complete, so accurate an exposition and elucidation of the functions, and the paramount importance of the *ganglionic* system in influencing all the organic functions, (including *secretion*), physiologically and pathologically, as is contained in the "Institutes" and other writings of Dr. Paine. An examination of the "*Index*" of the "Institutes" alone, will prove this. Fifty such essays as this of Dr. Campbell could be compiled from the "Institutes," and then leave material, facts and illustrations enough for as many more, and embodying and setting forth the same doctrines.

We have criticised the name "*Excito-Secretory System of Nerves,*" as conveying an erroneous and imperfect idea, inasmuch as it evidently expresses only a part of the influence, mostly the natural, physiological, while it leaves untouched the *alterative* and *depressing* influences, about which pathology and therapeutics are concerned, as well as the *nutritive* influences, and the simply fluid products; all of which are of equal importance, and are all embraced within the functional range of the same system of nerves.

We shall now proceed to set forth the views of Dr. Paine on this subject, as contained in the "Institutes" and the "Commentaries" as long ago as 1840, and which must long since have been familiar to very many of our readers. In doing this we shall draw largely upon his own words, as containing the best expositions of his doctrines, and shall substantiate any statements we may make by distinct quotations.

The author then endeavors to show that the functions of organs in the organic life of animals are carried on like the analogous ones in plants, by properties inherent in all parts, and that the nervous power or nervous influence contributes nothing more towards the functions of the nutritive and other secretory vessels than that of exerting a modifying, or exciting, or depressing influence upon them, through which the products are perfected in their character, or increased, or diminished—that these instruments of life are constantly liable to preternatural influences of the nervous power, and of an endless variety, and that there is no function in the natural state of the body, no condition of disease, no action of remedies in which the nervous influence does not participate; while organs in their compounded condition are more manifestly under its perpetual harmonizing influence, through the impressions made upon their minute structure. The author everywhere contends that the nervous influence is merely an *exciting* or *modifying* cause of the organic functions, and whenever he speaks of that influence as a *cause* of certain effects, or objects to its application as a *cause* of any of the processes of life, he always means in the former case that it influences the processes of life, and in the latter, that these processes are carried on by causes or properties inherent in all parts.

In applying these doctrines the author makes distinct, explanatory, anatomical specifications of the mechanism through which the nervous power operates in its function of *reflex action*, for the purpose of applying it to the interpretation of the modus operandi of all remedial and morbific agents upon parts beyond the seat of their direct operation, and also of its limitation in other cases to the motor nerves, and as the cause of all the physiological changes in the solids, and of all increased or otherwise modified secretions in parts not the immediate subjects of other agents through its various influences upon the instruments of organic processes, and of its modifications according to the nature of its exciting causes, as well, also, as proving the substantive existence and self-acting nature of the soul and principle of instinct, numerous quotations could be given in proof of these statements. A few, however, must suffice.

"Sympathetic sensibility appertains to what are denominated the sensitive nerves, and the sensitive fibres of compound nerves, which are also in part, the instruments of common sensibility. But a remarkable anatomical distinction, and which goes far to sustain the variety of sensibility which is here indicated, is found in the sensitive fibres of the sympathetic and pneumogastric nerves, which possess in the most exalted degree, the power of transmitting organic impressions to the nervous centre, but which are nearly destitute of common sensibility. Indeed, it is through this system of sensitive fibres that the organic department maintains the specific relation of its several parts."—*Inst.*, p. 102.

"The impressions transmitted through sympathetic sensibility may be received either by the brain, spinal cord, or certain parts of the ganglionic system, and either connectedly or independently of each other. When thus received by their nervous centres, they give rise to a development and transmission of the nervous power through what are called the motor nerves, and terminate in those influences which complete the functions of sympathy," etc.—Page 102.

"The operation of the nervous power is excited through the medium of sympathetic sensibility. This complex process results in the true function of sympathy. Impressions are made by physical and moral causes, by disease, etc., upon the foregoing varieties of sensibility, and according, also, to its different modification in different parts, and the nature of the operating causes. The impressions are then communicated to the cerebro-spinal axis, or to other central parts of the nervous system, and these bring into operation and variously modify the nervous power. The power, thus developed, thus influenced, or so modified in kind that it partakes of the nature of the transmitted impressions, which are more or less coincident with the virtues of the remote causes, is then exerted, through the motor system of nerves, upon the organic properties of distant parts, or of the nervous system itself, by which those properties and their resulting functious, and products, are variously affected according to the foregoing circumstances," etc. —Page 108.

"It is an important law that the nervous power is variously influenced in its morbific and remedial action by slight variations in the intensity of the operating causes, whether a moral or physical; though a determination is simultaneously given to its action by the numerous other conditions already mentioned, and which may happen to be present Thus an impression from cold, as a blast of air, or a drop of cold water, upon the skin in syncope, will rouse the respiratory organs. Another impression from the same, and under other circumstances, *will excite catarrh, or pneumonia, or articular rheumatism.* One degree of impression upon the stomach, by tartarized antimony, will determine the nervous power upon the respiratory muscles (as will cantharides upon the bladder, or mercury upon the salivary glands), and vomiting is the consequence; while it simultaneously reflects the same power upon the skin and other organs, and of which perspiration, etc., is a consequence. In smaller doses, the respiratory movements are not affected, but only the condition of the skin, etc., and in lesser degrees. But these examples embrace only certain parts of the influences in each case; while in others they are far more complex, one sympathetic result becoming the cause of others, till, through a single impression upon the skin, various circles of morbific or remedial sympathies may be instituted."—Page 109.

Under the head of "Counter-Irritants," Dr. Paine remarks: "Here is opened to us a display of those sympathetic processes which take their origin in cerebro-spinal nerves, along with the sensitive fibres of the sympathetic, and terminate in the motor fibres of the ganglionic system."—Page 643.

Again: "When remedial agents operate, a specific impression is transmitted to the cerebro-spinal axis, the nervous power more or less modified in a corresponding manner, and from thence reflected through other nerves, or other fibres, to the same or other parts, and according to the nature of the modification, disease will be produced or mitigated in those parts. However complex and variable, therefore, the phenomena, nothing can be more simple than the principle through which all those changes are produced."—Page 667.

It has been objected that the author uses the term *sympathy* in a loose, general and undefined sense, but such objection can only have been made by those who are unacquainted with his writings. He repeatedly defines the sense in which it is used, as in the following passages:

"Remote, and probably, also, contiguous *sympathy*, are conducted by the nervous power through the medium of the cerebro-spinal and ganglionic systems," etc. He uses the terms *remote, contiguous,* and *continuous* sympathy, the first two representing everywhere *reflex action* of the nervous system; the last having no manifest connection with that action, but probably influenced by the nerves, so far as they form a component part of the various tissues. Under the general term *sympathy*, for want of a better, he arranges the laws of *reflex action* and the numerous experiments brought to their illustration, and introduced evidently for the purpose of applying them to pathology and therapeutics. In short, the terms *contiguous and remote sympathy* are but terms of brevity, whose generic name is derived from that of the nerve which, with the pneumogastric, is the principal channel through which *reflex actions* of the nervous system are conducted; and the only distinction he makes between them is in limiting the former more particularly to the cerebro-spinal axis, as the central parts for *reflected* actions, while contiguous sympathy is manifested more particularly through local centres, which, it is stated, may consist of either the gangliæ of the sympathetic nerve, or of plexuses of nerves, or of some portion of individual nerves, as has been recently experimentally ascertained. It is, however, represented as being always associated more or less with *reflex* actions conducted through the brain and spinal cord, as manifested in the action of vesicants and leeches, when applied over some internal inflammation, dilatation of the iris, etc., etc. Our author sometimes uses the term *indirect action*, as well as *sympathy*, to denote *reflex action* of the nervous system; while the term direct is used in interpreting the modus operandi of the will and mental emotions, and of the nervous influence as excited by affections of the nervous centres, and for expounding, along with reflex action, the modus operandi of loss of blood, and for demonstrating the substantive existence and self-acting nature of the soul and instinctive principle, etc.

Dr. Paine not only makes *reflex action* the basis of his therapeutics, but maintains that its application to the modus operandi of all remedial and morbific causes is founded upon natural laws—that if there be anything in the consistency of nature, or in facts, the same physiological laws which govern the organization of the animal kingdom in its normal state, are equally at the foundation of all its deviations from the natural standard—that this universal principle embraces completely the physiological laws of the nervous system, which is demonstrated by a multitude of exact coincidences between the results of natural causes and those of a morbific and remedial nature, both physical and mental. *Reflex action* is everywhere represented throughout the "Institutes" and the essay on "*The Modus Operandi of Medicine*" (1842), as the immediate and universal exciting cause of all the effects of morbific and remedial agents beyond the seat of their direct operation (as emetics, cathartics, diuretics, diaphoretics), acting through its influences upon instruments of organic processes. He maintains everywhere that the influence of reflex action upon the organic properties is the cause of all *increase or diminution of the secretions*, as well as all other changes that may befall them, when not the immediate consequence of the direct local operation of other laws, as in vesication, etc. He applies it to elucidate the function of respiration, the action of emetics, cathartics, bloodletting, suppositories, the seton, alteratives (when its slowly progressive operation is clearly set forth), the action of cinchona bark, etc. etc. While he demonstrates the entire dependence of respiration on reflex action of the nervous system, as the stimulus of the muscular mechanism, he shows the dependence of the act of vomiting on the same causation; and this is carried through a long chain of analogics, consisting of the various modifications of respiration, of vomiting, as produced by emetics of various kinds, by loss of blood, by tickling the fauces, tobacco applied to the soles of the feet, by pregnancy, by shock of falls, etc., and by mental emotions. The author explains the philosophy of *metastasis* and *revulsion* on the principle of *reflex* action, and alleges it to be the cause of all violent disturbances and convulsions, a large proportion of which, he maintains, depend on simple irritations of comparatively unimportant parts, while they supply a fertile analogy for his interpretation of morbific and remedial causes; physical and mental. He also states that it influences the production of animal heat, which, he endeavors to show, is a *secreted* product, and rests upon common ground with other *secretions.*

We shall now present a few quotations from the essay on "*The modus operandi of medicines*," (1841), part of the "Institutes" devoted to *Therapeutics* "in further proof of the above statements. Beginning with the position, that remedial agents operate upon the same principle as the causes of disease, viz.: by reflex action, Dr. P. remarks—

"The brain and the spinal cord are the great centre of the nervous power, and the nerves of animal and organic life, especially the latter, are the media by which the impressions of morbific or remedial agents are transmitted to the great centre, and through which the nervous power is radiated abroad upon all parts of the organism."—*Essay*, etc. 1841, p. 42.

"It is through this principle that *emetics* and *cathartics* produce their most sensible manifestations, and the same is concerned in all their influences upon other parts."—*Loc. Cit.* p. 44.

"The examples of sympathetic influences, through the *reflex action* of the brain and spinal cord are almost endless, as they also are in every part of the animal organism."—Page 44.

"When an emetic operates, the impression upon the stomach is transmitted to the brain and spinal cord, through the pneumogastric and ganglionic nerves, the nervous power developed and reflected upon respiratory nerves, whilst another current descends along other fibres of the pneumogastric to the muscular tissue of the stomach."

"If the emetic operates also as a cathartic, impressions are transmitted from the intestinal mucous membrane to the cerebro-spinal system, the nervous power developed and modified according to the nature of these impressions, and radiated abroad as when the result of the action of the emetic upon the stomach," etc.—Page 46.

The author becomes truly eloquent in describing the phenomena of vomiting, its physiological and curative effects, through *reflex* influence, calling particular attention to its effects on the surface—bathing it in perspiration, causing saliva to flow from the mouth, starting a current of bile, and an equal effusion from the intestinal mucous membrane, etc.; in short, furnishing an example of *excito-secretory* influence, which none can gainsay or dispute. We would like to quote the whole passage did our limits permit; we can only refer to it, as the most graphic and accurate description of emesis, in all its relations, to be found in the language, and the author follows it up by remarking—

"The foregoing may be taken as an example of the *principle* which concerns the *modus operandi of all curative or morbific agents*, whether physical or moral, and of all the developments of disease that arise as sympathetic consequences of each other."—*Loc. Cit.*, p. 48.

Again: "The nervous power is not only nervously excited, exalted, or depressed, or modified in its kind, and produces influences upon remote parts according to these changes, but it is *reflected* upon particular parts according to these existing susceptibilities, the nature of the remote cause, and the part upon which the remote cause may operate. Thus, one impression from cold, as a blast of cold air, or a drop of cold water upon the skin, will rouse the respiratory muscles. Another impression from the same cause will excite catarrh or pneumonia, or articular rheumatism. Mercurial ointment will determine the nervous power, specially upon the salivary glands and liver; and the same effects arise from the action of mercury upon the stomach. Cantharides, internally, or externally applied, irritates the neck of the bladder," etc.—Page 52—1841.

This philosophy is in accordance with the anatomy and physiology of the nervous system, as laid down in the "Institutes."—Page 55.

"The cerebro-spinal nerves, and the sympathetic interchange contributions, in all parts, by which important influences of the former are established in the organs of organic life."—*Loc. Cit.*, p. 55.

"The sympathetic system is added especially to the organic life of animals, on account of the complexity of the organs, and to invite them in harmonious action, through circles of sympathy, and thus render them, each in its place, conducive to a common end. The cerebro-spinal system contributes to this result; and each system, unitedly, or independently, exerts special influences on the specific actions of organs, though these actions are carried on essentially through properties inherent in the several tissues."—Page 55, *Inst.*

These quotations will suffice, and more than suffice, to establish one point, viz.: that whatever of reflex function has been recently claimed by others, as novel, or a new "discovery," forms the very groundwork of Dr. Paine's writings, and is everywhere made the leading principle in his philosophy. He everywhere teaches that *secretion* and *excretion* are influenced by direct and *reflex* action of the nervous system upon their immediate instruments, when they will be simply increased or diminished, or, what is greatly more important, variously *altered*, or new ones generated, according to the manner in which the nervous power may be modified by the causes which bring it into preternatural operation, both physical and mental. The fluid products of glandular organs, sweat, saliva, gastric juice, etc., with their various modifications, though generated by the organic mechanism through its own inherent properties, are also shown to be controlled and modified by nervous influence, especially *reflex*, whether excited by physical or mental causes. If, after all, any doubt remain, whether our author recognizes any excito-secretory function, let him turn to what is said regarding the *seton* (pp. 679, 681, *Inst.*), where will be found a clear and comprehensive account of the whole philosophy of the alterative influence of *reflex action* of the nervous system, as the medium through which all the modifications of secreted products are brought about, and as exemplifying all that is even concerned, according to the author's views, in the modus operandi of remedial and morbific causes upon parts beyond the seat of their direct operation.

It will be seen that our author not only everywhere recognizes all *excito-secretory function* but also all *excito-secretory system of nerves;* he also gives distinct anatomical specifications, as regards the mechanism through which the reflex influences are brought about. His theory is comprehensive and philosophical, based on anatomical structure, and physiological function, and embracing all known phenomena, including pathological and remedial influences. It is a consistent theory, based on recognized facts, and binding, in harmonious relation, the diversified facts relating to healthy and morbid action and the modus operandi of remedies. It is not *partial*, like the theory of Campbell and Allen, explaining a few phenomena only, but leaving all the most important a *terra incognita ;* nor does he fall into the error of naming an entire system of nerves, from one of its functions, viz. *secretory*, but gives to all its functions, each in turn, its due importance, depressing, and alterative, etc.; weaving all facts and all known phenomena into a beautiful and philosophical system, which will stand as a monument of the author's genius and learning as long as medicine shall be cultivated as a science.

Dr. Paine nowhere claims that he discovered these causes of the nervous system which he has so successfully applied to the elucidation of disease, and the operation of remedies ; for he was aware that *excito-secretory action* had been noticed by Bichat, and fully established by the experiments of Wilson, Philip, Henle, Peipers, Muller, Dr. Reid, Krimer, Humboldt, Brodie, and others many years ago. In Muller's Physiology, in the chapters devoted to a consideration of the "Laws of Action of the Sympathetic Nerve, and the Propagation of Impressions in it," "Of the Peculiar Properties of Individual Nerves," "Of Sympathies," etc., will be found all the various laws of nervous action and function hitherto discovered ; but it may be safely claimed, in behalf of Prof. Paine, that these physiological laws were first successfully applied by him to pathology and therapeutics—we mean in their *totality*. Marshall Hall had, it is true, been laboring for several years upon the *excito-motor* phenomena and applying them in the elucidation of healthy and morbid function. But Dr. Paine was the first to explain fully the philosophy of the operation of the nervous power in producing motion under all its various aspects, as manifested in its natural regulation of organic actions in the phenomena of sympathy induced by morbific and remedial agents, or by the influences of disease in the motions which are generated in the organs of organic life, by the passions and analogous affections of the mind, in the movements of the voluntary muscles. in the production of sudden death from all causes, and the physiological interpretation of the recognizable laws of sympathy, and their general introduction into pathology and therapeutics; all this was first attempted, and, we think successfully accomplished by the author of the "Institutes," and if any one chooses to borrow from him sufficient material for a "prize essay," it will hardly be missed, and the author can well afford, from his abundant riches, to spare thus much, and still have enough left to supply the cravings of any ordinary ambition. It is true, astonishing as it may seem, that through all the laws of nervous action, or by "sympathy," as used by our author, that are necessary to the full interpretation of the remote effects of morbific and remedial agents, are as well established perhaps, as any in physics, they had not been extensively applied to these important objects before the work was attempted by Dr. Paine; and what is more, those philosophers who have contributed most to their critical expositions, have overlooked their most important pathological and therapeutical bearings, and neglected to apply the nervous power in a philosophical manner to our explanation of the natural phenomena of sympathy. This work, however, has been wrought out by our author with an amount of learning, industry, intelligence and success, that cannot but command our highest admiration, and yet Marshall Hall has stated (*London Lancet*, May 2d, 1857) that "the *idea* and the *designation* of excito-secretory action belong to Dr. Campbell;" though he says "the elaborate *experimental demonstration* of reflex excito-secretory action, is the result of the experimental labors of M. Claude Bernard," while his "own claim consists in the vast *generalization* of the excito-secretory action throughout the system." Dr. Hall is very careful not to recognize any "excito-secretory *system of nerves*." As to the opinion, that Dr. Campbell "first detected the excito-secretory function," our readers can now form their own opinions after what has been stated above.

In conclusion, we ought perhaps to make some mention of the claims of Dr. J. A. Allen, of Michigan, who feels aggrieved by the adjudication of Marshall Hall, and accordingly enters a *demurrer* in the following terms:

"What *I* claim is the great generalization, that excito-influence is followed by a reflex change, in which the effect is not a *motion*, but *a modification of vascular and nutrient action*. That this takes place by means of the *double nervous arc*. A vast number of therapeutic phenomena are thus experienced."—*The Medical Independent*, Sept., 1857, p. 383.

Now, when we consider that Dr. Allen attended the lectures of Dr. Paine in 1845, where he must have heard the doctrine of *reflex-action* discussed in all its bearings, physical, pathological, and therapeutical, and especially its relation to the modus operandi of remedies, embracing its influence and secretion, nutrition, etc., we shall be led to admire, at least, the modesty of such a claim, if not its justice. Dr. Allen is very careful to state that he has never read Dr. Paine's writings (we should think better of him if he had), while, at the same time, he ventures to criticise them, and charge him (Dr. P.) with opinions he never held. For example, Dr. A. represents Dr. P. as adopting the doctrine of Stahl in regard to the vital principle, whereas Dr. P. combats it throughout. Stahl represents the "*rational soul*" to be the vital principle; Dr. P. maintains that we are ignorant of its nature; that "it is practically useless to investigate its nature," etc. Had this charge been brought against Marshall Hall, it could have been supported by ample proof from his writings, as in the following passage from his work on "*The Nervous System:*"

"The principle of action in the cerebral system is the *ψυχὴ*, or the *immortal soul.* Upon the cerebrum the soul sits enthroned, receiving the ambassadors, as it were, from without, along the sentient nerves; deliberating, and willing, and sending forth its emissaries and plenipotentiaries, which convey its sovereign mandates along the voluntary nerves to muscles subdued to volition."

The other charges of Dr. Allen are no better founded than this one. All his originality consists in the use of the term "*double nervous arc!*" in place of reflex action; and he is entirely welcome to any credit which may accrue from the "discovery." Dr. A. may possibly think his views were original; but where they do not strictly coincide with those of Dr. Paine, they are simply obscure and unintelligible. The physical explanations in regard to the *manner* in which alterative, secretory, and other effects are produced by reflex action, are purely hypothetical, and not capable of proof. If the author thinks that any fame is to accrue from labors in this direction, we fear he will be disappointed. The same hypothesis has been supported by Wilson Philip and others, and is now well exploded. It has not vitality enough for rejuvenation.

As to the author of the "Institutes" and the "Commentaries," he can well afford to bide his time. His fame is secure. It will grow brighter with time. The profession will delight to cherish it, and to do him honor. They will not allow a single particle of his just merits to perish, or to be appropriated by others. Posterity will vindicate all his just claims, and assign his rank among the great minds of our country. But few properly appreciate or are even acquainted with the extent of his Herculean labors. None but those who have labored in the same field can justly estimate the vast range of his learning. With slight variation, we may adopt, in regard to him, the language of Dr. Watson, as applied to Marshall Hall. We must, in passing, pay the tribute due to one indefatigable laborer in this department of science, whose sagacity has enabled him to seize the clue, and, in a great measure, to unfold the mazes of the labyrinth in which the physiology of the nervous system has been so long entangled. Dim and uncertain glimmerings appear in the writings of bygone authors; but it was never clearly discerned, and plainly stated, and successfully applied to the elucidation of disease, and the operation of remedies, until the publication of our author's interesting researches into the functions of the nervous system. C. A. L.

Art. IX.—*Materia Medica, or Pharmacology and Therapeutics.* By William Tully, M.D., vols. i. and ii., pp. 1534. Published by J. Church, M.D., Springfield, Mass., 1858.

This is an original work, and presents a new system of materia medica. That there is room and necessity for great improvements in this science has long been perceived and felt by those who have given close attention to it. The obvious imperfections in all our systematic arrangements of it, their want of fitness, consistency, and naturalness, and its consequent lack of principles, which are so necessary to guide us in our efforts for its improvement as well as in its practical application, have led some to the opinion that nothing short of an entire re-arrangement of it would prove adequate to its wants. On the other hand, an opinion has arisen in some quarters recently somewhat adverse to this, viz., that the best way of managing the sick is to dispense with the use of drugs as much as possible, or that the perfection of medicine will come, when the use of medicines will be entirely, or very nearly, dispensed with. It can hardly be impertinent to suggest that the rise of this latter opinion may have some connection with the truth of the former; or that our want of faith here, as elsewhere, may be attributed to our want of knowledge. But be this as it may, those who may consider it safe and proper for us to continue our efforts for the improvement of materia medica till the good time coming arrives, and especially those who are earnestly in favor of our doing so, will welcome an original treatise upon it; nor will they consider their time as misspent in examining a revision of the whole subject, so thorough as that which is contained in the work before us.

The name of the author has long been familiar to physicians and to men of science in almost every department of knowledge. It has been more favorably known to scientific men outside of the profession, however, than to the profession itself. This may be accounted for, perhaps, without derogating from his merits as a physician, or the value of his labors for the advancement of medical science, his favorite pursuit. The reception which "Miner and Tully's *Essays on Fever and other Medical subjects*"—of which he is supposed to have been the principal author—met at the hands of the profession some thirty-five years ago is well known to some of the older physicians. Nothing could have been more acrimonious than the reviews of that work; and yet it is worthy of special remark that, notwithstanding the almost universal rejection of the principles and practice it inculcated, both have come to be adopted, to a considerable extent, if not very generally, in Europe and America; as evidence of which we need only refer to the efforts now and then put forth in these latter days, and on both sides of the Atlantic, to restore the use of the lancet in the treatment of febrile diseases. Besides the high character as a man of science universally accorded to him, he is admitted, by his most zealous opposers in medicine, to have "a mind of a peculiar cast; original, inventive, self-relying, comprehensive, deductive, and inductive;" and the work before us will bear evidence that it has all these characteristics. The unprejudiced inquirer, therefore, will ask whether this might not have been an instance of one's coming to his own and his own's receiving him not.

But there is reason to believe that this work on materia medica will meet less opposition, and be received with more candor and liberality; and this is the more to be hoped for from the fact that even a cursory examination of it is sufficient to show that it is one of no ordinary production, and, in some respects, of no ordinary merit. It is thoroughly original, strictly philosophical, displays great learning and research; is free from theories and speculations, and reformatory in its tendency. It evinces a mind in the author possessing great facilities for scientific attainments, and a high appreciation of the substantial fruits of learning, rather than its beauties and refinements—awake to the great interests of the profession, though in sympathy with but few of its leading influences. It is calculated to instruct rather than to please; to excite thought and a spirit of investigation, rather than pride and satisfaction at the present state of our knowledge. By the practical man, it will be read with profit and instruction, however widely he may differ with the author on some points, and whatever fault he may find with his style, his manner or his spirit; or whatever complaints he may utter at the extra labor he finds imposed upon him. As an illustration of the true *modus investigandi*, it is especially worthy of a careful and attentive perusal. The author writes obviously from experience; but his experience has been different from that of others. The objects he has aimed at have been different, and consequently there is novelty in his means of attaining them. As here presented, it has novelty sufficient to arrest the attention of any one who is capable of becoming interested in a subject that has too long been regarded as intrinsically dry and uninteresting.

The justness of the foregoing remarks will appear upon a thorough examination of his classification, which would be worthy of such an examination, though there were nothing else in the work to merit attention. Passing over the several introductory essays in which are exhibited the same originality of thought and reasoning, and, instead of theories and speculations, the same rigid adherence to a rational discussion about facts, that are to be observed throughout the remainder of the work, we come to this subject of classification. The utility of no science can be fully comprehended till it has been perfected; in other words, till the subjects it embraces have been classified and arranged, and upon true principles. Science derives little aid from classification founded upon principles not essential to it. Its subjects may be treated of alphabetically, but such an arrangement has no tendency to develop its principles, or to facilitate our discoveries. Hitherto our labors for the advancement of materia medica have been less amply rewarded than they would have been had they been rightly directed. The proper place for every new fact should be known, but no proper place for it having been provided, it cannot assume its due importance, and is liable to be forgotten. And besides, our knowledge of the proper place for a fact is often the very thing that leads to its discovery. Notwithstanding the able systematic works upon the subject already produced, materia medica can hardly be said to have been yet reduced to a science, unless the attempt made by the author of this may be regarded as successful.

Again, the necessity of classification anywhere is generally in proportion to the inherent difficulties attending it, which in materia medica are very great, to be sure, but have too long been looked upon as insurmountable; and hence we have numerous treatises upon it that discard all classification—at least all founded upon any principles of materia medica—as impracticable and worthless. It should be no marvel, therefore, if it is seen by those who have given close attention to it, that our present knowledge of materia medica is confused and imperfect, and that we have comparatively few principles to guide us, either in our labors for its advancement or in our application of it to the purposes for which it is intended.

However skeptical our readers may be upon this subject of classification, therefore, if he rejects a true one when presented to him, the next step most proper for him will be to take his place outside of a profession called scientific, and among those who do the same thing. The line between scientific and regular and irregular physicians, should be correctly drawn, and the importance of its being drawn where it should be, is not in the least affected by the question so often asked, nor in whichever way it may be answered, whether the irregular ones are not as successful in practice as others, *at present.* Physic will answer its ends when reduced to a science, and when the science has been perfected. The obstacles may be many and mighty, but should not prevent us from keeping our faces in the right direction.

He who proposes a true classification for the materia medica, therefore, will deserve well of the profession. Not materia medica alone, but medicine as a whole. The interests of the profession, and of humanity will be promoted by it. Let no one despair of seeing such a classification till he has examined the one presented in the work before us, a synopsis of which commences on the four hundred and fourth page. This synopsis, which may be regarded as a syllabus or abstract of the whole science, is clearly the result of the most profound study and analysis. It is what some one has represented it to be " a common sense classification, without arbitrariness—true to nature, and faithful to science ; and will commend itself to every intelligent physician." It was neither created, contrived, nor invented ; it was discovered. Not the whole of it has been discovered ; we shall yet obtain new views of it. Like most other things, it is susceptible of improvement ; but its principles—its foundation will not be materially altered. It supplies an index and puts up the way-marks to guide and direct us in our future investigations.

Comprehended in this synopsis are his definitions of the several classes. Here also, we notice the same fidelity to truth and nature. Unlike those of most authors, they answer all the purposes of definitions. The importance of clear, precise, and true definitions need not be insisted on. Here, obviously, neither clearness, accuracy, nor precision are to be sacrificed to brevity. In these respects there is the widest contrast imaginable between him and other writers, insomuch that, while examining his, we were frequently led to inquire whether there were any others that could be properly called definitions. They evince either far more close and accurate observations of the powers and effects of medicines than are common, or a more happy faculty of portraying them. In either case, his are not to be ignored. We are tempted to give an illustration ; but first a word or two by way of explanation will be needed. The nervines of some authors and the antispasmodics of others, correspond to the euphrenics* of Dr. Tully, and include the same articles, viz: tea, coffee, valerian, tobacco, wine, alcohol, ether, exhilarating gas, chloroform, etc.; the list of articles, according to Dr. Tully, being a large and important one. His proem to this class will be found interesting, not to physicians only, but to non-professional readers, so many of whom are as familiar with the operations of some of them as physicians themselves. The following definitions of antispasmodics, as given by different authors, may be cited. They are taken from books that happen to lie upon our table.

1. "Antispasmodics, with a general stimulant power, exert a peculiar influence over the nervous system, exhibited in a relaxation of spasm, the calming of nervous irritation, etc., without any special and decided determination to the brain."

2. "Antispasmodics are medicines that subdue or alleviate spasm, independent of the removal of its cause."

3. "Antispasmodics are medicines that increase and equalize nervous energy."

We have not time to search for authors who use the term nervines instead of antispasmodics as the name of this class; but their definitions will not vary materially from the foregoing. We now turn to Dr. Tully's definition of the same class of articles, though under a different name, which is as follows:

"The Euphrenics, *in the first degree of their operation*, obviate languor or lassitude where it exists; *in the second degree of their operation*, produce a peculiar, calm, placid, and pleasant state or condition; *in the third degree of their operation*, occasion a peculiar and rather agreeable preternatural but not exhausting wakefulness; *in the fourth degree of their operation*, produce more or less positive exhilaration, which, by some articles, is increased to such a degree, that the actions of the subject are not under the control of his will, and perhaps amount to actual delirium; *in the fifth degree of their operation*, occasion a complete anæsthesia, or destitution of common sensation, or a state of insensibility to pain, sometimes with, and sometimes without, loss of consciousness."

Before leaving this subject of the definitions, which should be pursued much farther in order to exhibit all the important peculiarities of those contained in this synopsis, we should notice what may be regarded as a fault in the one already quoted. It will be observed that, in his definition at least, he does not even recognize an antispasmodic effect as belonging to this class of articles. This probably arose from no difference of opinion between him and others in regard to their operation, but simply to the facts in which all will agree, viz.: that these are by no means the most reliable remedies for spasms; that this effect from them is only an occasional or incidental one; and that the articles are far more valuable and far more frequently prescribed for other purposes; while an antispasmodic effect is obtained with much greater certainty from articles belonging to another class. The antispasmodic effect being only an occasional or incidental one, this should not be alluded to in the definition; while such an effect being produced with far greater certainty by another set of articles, renders the name inappropriate and liable to mislead, according to Dr. Tully. Those who have prejudged this work may object, as they will doubtless, to the precision of thought, the close reasoning, the just criticisms, the useful comparisons, and the important practical distinctions, that characterize and pervade it; we cannot think that posterity will adjudge them useless or unimportant.

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* The reader is desired to exercise all possible forbearance till we come to apologize, as best we can, for Dr. Tully's use of Greek words, which may render his treatise distasteful to many.

But in this synopsis there are other things to be noticed of still greater importance than any that have been yet referred to. Besides examining the different classes heretofore recognized, showing the insufficiency of the foundations of some and rejecting them, he introduces several that are entirely new. An analytical survey of the changes thus proposed, and the reasons for them, tracing them in their practical results, their effects to modify the whole science of Pharmacology and of practical medicine, would take us far beyond the limits assigned us. Indeed nothing short of a reprint of the synopsis itself, together with a considerable part of the proem to each of the new classes, would do justice to the subject. In regard to several of the new classes there can be no question of their being well founded and important to be retained. We shall have time to speak of only one of them.

There are a number of articles, some of which have been coming more into use of late, that have heretofore been classed with the narcotics, not because they have the slightest effect to allay pain, irritation, or restlessness, or to produce sleep or somnolency, but simply, as it would seem, because, like the narcotics, they act chiefly upon the nervous system. No true definition of the narcotics can be given that would touch a true definition of the operation of these articles at any other point than this—their action upon the nervous system. This difficulty has been discovered in part, and attempted to be remedied by calling these acrid narcotics, though the majority of them, and the most prominent ones, as strychnos and ignatia, have no acrid properties whatever, while aconite and arnica have. These articles, whether acrid or not, are brought together and arranged in a distinct class. The class being new, he must of course be allowed to have a new name for it. Narcotics, from which class this seems to have seceded, being Greek, and nervous erethism being the most expressive of their effects, he calls them erethistics. No good certainly can come from calling articles narcotics which produce none of the ordinary effects for which narcotics are given, but effects which are in some respects opposite to those of narcotics His definition of this class, compared with that of the narcotics, will exhibit the prominent peculiarities of each, while the proem to each will exhibit the difference in their therapeutic applications. If the definitions are as faithful as that of the euphrenics heretofore cited—as, from the attention we have given to the subject since the proems were published, we think they are—it will be seen at once that, if the author makes some distinctions that will not be soon recognized by the profession, he makes others that are important to be recognized immediately.

In the class euphrenics, the definition of which has been quoted, will be found not only the nervines and antispasmodics of other authors, but several articles that have been heretofore classed with the narcotics. It is not till the power upon which a class is founded has been clearly recognized and defined, that we have anything to guide us in selecting the articles that belong to it; and it is the thorough manner in which these primary steps have been taken—distinctly recognizing the power and clearly defining it, which are in reality but one and the same thing—that makes such havoc with all previous classifications. Another cause that has contributed to this, however, is his thorough investigations of the precise powers of each and every article, and which has resulted in the transferring of several of them from one class to another.

With regard to the adenagics, another new class to which no allusion has been made, a distinguished physician once remarked to us that "its introduction would form an era in the history of medicine." It matters not if some of the articles it includes have been in use time immemorial, or that the power upon which it is founded has been indistinctly recognized; it is the right use of our knowledge—our making the most of it—that is to be commended. If the articles have come in, they have been intruders heretofore, for they could find no place in any of our systems. To what class can mercury, iodine, colchicum, veratrum, sanguinaria, and many others in daily use be referred at present? Indeed, so vague and indefinite have been our notions in regard to the power, and its therapeutic application, that it has been difficult, if not impossible, to communicate any knowledge we may have acquired in regard to either; except that they are *good* for syphilis, scrofula, rheumatism, etc. These evils will be remedied, to a great extent, by a distinct recognition of the power, a clear definition of it, by bringing together all the articles that possess it, comparing them with each other, arranging them in a distinct class, and thus directing greater attention to it, pointing out the way and leading to its further investigation. As in pathology, so in therapeutics, there are many points upon which our present knowledge is of little or no avail, but which it would be easy, if we were not too strongly set against innovations, so to connect, systematize and arrange, as to make them available and even highly useful.

There are those who think little of materia medica, who do not pursue this as an important branch of medicine, who speak and write flippantly against a redundancy or a long catalogue of articles, and even against the use of much medicines. They will not be particularly interested in this subject. But to those who regard materia medica as of great practical importance, who are more dependent upon their knowledge of the precise operation and effects of the various articles they use, the best way of managing them, and their adaptation to the relief of certain symptoms and certain pathological conditions, than to any other kind of knowledge, the opening of Tully's Materia Medica, and especially on arriving at this part of it, will be like a mine of wealth which will not be forsaken till it has been thoroughly explored ; provided, however, that they have no preconceived notions against innovations, or in favor of the immutability of our present systems. We have only to say further, that whatever may be thought of his reasons for these innovations, as they may be termed, a thorough consideration of them cannot fail of being useful in exciting thought and a spirit of investigation, in producing more close observations, in gaining new experience and directing attention to some points never before presented to most minds, and perhaps never before presented anywhere ; and, above all, in awakening a new interest and producing enlarged views of the whole science of medicine. Such, as appears to us, must be the inevitable effects upon those who will address themselves earnestly to the study of the subject as it is here presented, and this, too, whether the author's propositions shall be acceded to or rejected. It is the tendency of this work to do all this, whenever it is studied, that constitutes one of its chief merits. Good compilations are not to be undervalued, though good compilers are common ; but such are not to be compared with the originality, independence and essential vitality of thought, insight and investigation, which are not common, the results of which are here displayed.

The reasons for most of these changes are sufficient. It may be predicted, with the utmost certainty, that their utility and importance will never be questioned ; though, for the present, they may be simply ignored ; while some of the minor faults of the work may be held prominently up to view. If independence of thought and judgment is not characteristic of physicians of the present age, it is to this that they are to look, even more than to the commutation of facts, for the attainment of their high object. It is to this that they are often indebted for the facts themselves, and still more frequently for a knowledge of their use and importance ; while there is nothing that stands more in the way of the advancement of medicine than that kind of deference to public opinion, or the opinion of individuals, which sometimes amounts to servility, and which is too often apparent. It is humiliating to hear physicians say, as they have often said, and without blushing, "whether this thing is to be well received and become popular or not, depends upon its reception in certain quarters, by certain societies or certain individuals." In such cases, both the societies and the individuals referred to may be quite innocent ; but the effects are the same, the fault being with the dependents themselves. There are many other ways in which this lack of independence manifests itself ; but where there is one who will receive a proposition upon its merits, there may be twenty or even a hundred who will wait to know how it is to be received in certain quarters or by certain individuals. Even where independence is most looked for and most needed, it is often most wanting. The length of his subscription-list is of too much consequence to the journalist to admit of his expressing his real convictions in favor of an unpopular doctrine, though, as we shall have occasion to show, he is, in some cases at least, prevented even from examining a proposition against which judgment has already been passed. Fortunately, or unfortunately, such journalists soon become fitted to their condition, for this habit of suppressing one's convictions soon relieves him of the misfortune of having any convictions; or at least any that need to be expressed. Vaccination itself is not a more sure prevention of variola. Whatever good may result from medical societies and associations—and that much good has resulted from them cannot be denied—of their ill effects in suppressing independence of thought and judgment there can be no doubt; and yet for this there may be no individual member of any of them who is responsible. The evil is greatest where the society is most flourishing and influential, when there are so many members who have reputations already achieved or to achieve—and it is to be regretted that there are so many that belong to one or the other of these classes—and with whom nothing can pass till it has been indorsed by the society. Deference to the society—certainly not to the individuals of it, may be characteristic of the leaders, if there are any, as well as of others; with each and with all, though the soul of the society, or the thing that is deferred to, has no existence, the phantom has its sway. It is in the mechanic arts, where thought and judgment are free, where no deference is paid to soulless societies, and where changes and innovations, instead of being resisted, are welcome and invited, or examined at least, that improvements are the most rapid. Whatever we may do or aim to do for the good of the profession, we should do nothing, willingly or unwillingly, to harm independence of thought and judgment, to its injury. Nor is there any department of medicine that has been so far perfected as to make it necessary that all important changes should be so strictly guarded against. The principles of medicine are not yet so numerous, nor are its doctrines so well established, that the injunction "prove all things and hold fast that which is good" is not as applicable to physicians as to theologians. Physicians, as well as theologians, may be too apt to be frightened at heresy, or what they deem such; and when they scent heresy afar, or when, upon its nearer approach, they fly in its face with tooth and nail, accuse it wrongfully, abuse and misrepresent it in various ways, we are always reminded of Uncle Toby's answer to the question, "What's the reason that treason never prospers?" "Because," said he, "when it prospers, it isn't called treason;" and that there will be time enough for treason and loyalty in politics, as well as heresy and orthodoxy in physic and theology, to change names many times yet.

We are loth to leave this subject of classification, upon which so much remains to be said, and which has been pursued only far enough to show the manner in which this part of the work has been performed, but must proceed to notice some of the objections that have been brought against it. One of the faults of the work, which has been most frequently alluded to, and which may have more effect to prevent its being well received than any other, is his introduction of new terms, and particularly his resorting to the Greek language for them. For this it may be hard to find an apology, but lest its valuable merits should be linked with it, and all be rejected together, it seems important that some apology should be offered.

A definitive nomenclature can have no effect but to retard the progress of science. Names too often become things, and error is propagated by inappropriate names much oftener than is supposed. We well recollect how, in our early practice, antispasmodics* were resorted to in all cases of spasms, to the neglect of what we now know to be the most effectual remedies for spasms; and this is by no means the only instance in which we are still liable to be misled by inappropriate names. Authors themselves are misled in the same way. Having first adopted an inappropriate name for their class, their definitions must be so formed as to make them seem appropriate; whereas, the true course to be pursued in such a case, is first to consult truth and nature—the prominent and characteristic efforts of the articles belonging to the class—in framing the definition, and then selecting a name that would be appropriate. Commencing at the wrong end, their minds were diverted from truth and nature, which have very little to do with their definitions, and hence both the name and their definitions are worse than useless. It can hardly be supposed that the authors, from whom the above definitions of antispasmodics were taken, were blind to this fault, and yet upon any other supposition, their neglecting to correct it, lest they should be accused of innovation, would be unpardonable. As there is no science to which husbands and wives, parents and children, brothers and sisters, and even physicians themselves, so often look, and with the intensest anxiety for its benefits, as to materia medica, so there is none in which reformation in this respect is so loudly called for.

An error of this kind, the effects of which were more amusing than serious, was committed by the author himself, notwithstanding all the pains he takes to guard against such. In treating of the *modus operandi medicaminum*, he had an article headed "non-absorption of medicines into the system," which was inappropriate. Two of the journalists, misled by it, attacked him vigorously, and to the extent of several columns in their journals, referring to facts and quoting authorities to prove that medicines are absorbed, while there were others who simply lamented the author's lack of information on the subject; whereas, had they read the article, instead of being frightened at its heading, they would have seen that the absorption of medicines was not denied; that he simply maintained that their absorption was not necessary to their medicinal effects; or that this was not the way to explain the modus operandi of medicines; and that the only work he had laid out for them, was to refute his reasoning upon this point. We regretted the mistake on our own account, for, strongly suspecting the author to be in error, we were anxious that some of the constituted watchmen should set him right; instead of which they only did battle against the man of straw which he had inadvertently set up for them. We are glad to see that the author, true to his instincts and deploring such consequences, has done what he could to correct the mistake, by inserting in his table of contents "absorption of medicines not necessary to their medicinal effects," instead of the original heading, which is retained, of course, in the body of the work. We trust that some one will ere long address himself to the work of exposing his sophistry or the insufficiency of his reasoning on this subject.

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* We beg pardon of the author for using this term instead of antispastics. There is this to be said, however, in favor of his term: it saves type; though this, most certainly cannot be his reasón for adopting it.

It seems hardly necessary to insist on the use of appropriate names, or the importance of substituting appropriate for inappropriate ones in all cases, regardless of the cry of innovation that may be raised. those who lament most the author's course in this respect are generally the greatest sticklers for authority, and will be glad to learn doubtless that he is supported in it by the very highest authority. The improvement of science itself must go hand in hand with the improvement of its nomenclature. To this effect he quotes two authorities, as follows. We wish these quotations to be inserted here, because it would be difficult to find three brief paragraphs that have resulted from so much close and sound thinking. They are not argumentative, but are important, simply for the truths that they enunciate, and which lie nearer the foundation of all science than is generally supposed.

"We think only through the medium of words." "Algebra, which is adapted to its purpose in every species of expression, in the most simple, most exact and best manner possible, is at the same time a language and an analytical method." "The art of reasoning is nothing more than a language well arranged."

"While I thought myself only employed in forming a nomenclature, and while I proposed to myself nothing more than to improve the language of chemistry, my work transformed itself by degrees, without my being able to prevent it, into a treatise upon the elements of chemistry."

"The impossibility of separating the nomenclature of a science from the science itself, is owing to this, that every branch of physical science must consist of three things—the series of facts which are the objects of the science—the ideas which represent the facts—and the words by which those ideas are expressed." "Like three impressions of the same seal, the word ought to produce the idea, and the idea to be a picture of the fact." "And as ideas are preserved and communicated by means of words, it follows of necessity that we cannot improve the language of any science, without at the same time improving the science itself; neither can we, on the other hand, improve a science without improving the language or nomenclature which belongs to it." "However certain the facts of any science may be, and however just the ideas we may have formed of these facts, we can only communicate false or imperfect impressions of these ideas to others, while we want words by which they may be properly expressed."—(For references see *Tully's M. M.*, p. 231.)

It will hardly be pretended, by any one, that the language and nomenclature of materia medica are perfect, or that the science itself may not be greatly improved. In the task Dr. Tully has undertaken, therefore—a task to which there are but few more competent—he will have the prayers of all true lovers of science and the profession for his success, and can have no opposers for whom he will need to turn aside to the right hand or to the left, except such as may object to his manner of performing it. A close examination of it with reference to the subject, can hardly fail of convincing any one of the consistency and fitness, if not the agreeableness of its terminology.

In reference to its Greek words, of which so much complaint has been made, it will be observed, that in his nosology, he follows Dr. Good implicitly, against whom no such squeamishness was ever manifested; so that so far as nosology is concerned, Dr. Good must be put in the same category with him, and both must sink or swim together, except that Dr. Good must have about one hundred times the burden of Dr. Tully to bear, since this is about the proportion the offensive words of the former bear to those of the latter. But if both are pardoned in respect to nosology, the remaining offence of Dr. Tully will be his use of Greek for the names of the twenty or more classes of the materia medica, for which the reasons brought by Dr. Good in favor of Greek for his nosology, will be as valid for Dr. Tully; and it may be further said in extenuation of this fault, that he found one half of the names of the classes Greek at the commencement of his innovations.

We really find it difficult to treat this objection with seriousness, and can hardly believe, notwithstanding it has been so frequently urged in private of late, that it will ever be publicly and seriously proposed. It would seem that those who admire symmetry or due proportions and regular distribution of parts in architecture, should not be greatly displeased at such uniformity in the names of the classes as is here proposed, the best way of arriving at which, as appeared to him, was to go back to the Greek language, where all scientific men go in such emergencies. Uniformity, however, was by no means the greatest advantage contemplated in the few changes he suggests.

We can readily understand how an unprejudiced reader, may, from a hasty or partial examination of it, made without particular reference to its terminology, and without considering the reasons for any change in this respect, be displeased at some of its new terms; though we cannot so easily comprehend how this special antipathy to its Greek words, which is so apparent of late, has originated. It was hardly to be expected that in the report on American medical literature, recently submitted to the American Medical Association, its Greek words would be alluded to in a disparaging manner; or in such a manner as to make this the grand objection urged by all objectors since; not one in fifty of whom can possibly have had an opportunity of examining it for themselves, and especially with reference to its Greek words. Those who have examined the synopsis of the classification where their etymology and exact signification are given, can find no difficulty in understanding them, and there are not over half a dozen of them that would not be well enough understood without any explanation. These last, however, occur in the introduction, and before he arrives at the classification. Here some of them may not have been sufficiently explained; and here only can there be any just ground for complaint of this kind.

Those who admit that some improvement in the language and nomenclature of materia medica may be called for, may wish to know something of the author's qualifications for such an undertaking. There are but few, however, who will need to be told, that he is a physician of no ordinary scientific attainments, and a philologist to whom Webster himself did honor more than to any living man in America, and that he who comes to criticise him in these respects, should come well prepared. Those who are eloquent in favor of a more thorough preparatory education for the medical student, as the first step to the development of a more high-toned medical literature in our country, may ignore Tully's Materia Medica, or may speak disparagingly of its Greek words, but they will do either with an exceedingly ill grace.

Though the example he sets in using chemical and natural history names, instead of the common, popular, or vulgar ones, may never be followed, yet if this is absolutely necessary to anything like a good degree of accuracy, as he, apparently at least, proves it to be, those who may object to his course in this respect, will have nothing to do but to show either the fallacy of his reasoning upon the subject, or that such accuracy and precision as he contends for are not needed. From the utter confusion in which this whole subject of names for the articles of materia medica, whether of chemical, vegetable, or animal origin, remains at present, and which is constantly increasing, it is not to be wondered at, that some attempt at reformation should be made in this respect. The errors in it should be pointed out, but the attempt itself is certainly pardonable. For many of the articles, we have none but their chemical and natural history names at present, and for the sake of uniformity as well as accuracy, it may be deemed expedient to take the course that he suggests ; and besides, the full synonymy he proposes to give, in treating of the individual articles, will obviate all objections on this account ; except the tendency it must have to increase the size of the second volume. If the evil is not checked soon, the synonymy themselves will be sufficient to fill a large sized volume.

Its accuracy and precision in the use of language is a commendable feature of the work ; in noticing which, we shall be obliged to allude to some of its real faults. If its tautology, its verbiage, or its useless repetition of words and phrases, and its disagreeable prolixity in other respects, may be justly complained of, there is this to be said in its favor, that no one, who reads it with any care at least, is liable to mistake his meaning, or the precise thought that he wishes to convey. In this respect there are but few medical works to be compared with it. A recent English writer upon medicine says, and with too much justness we fear, "If this science abounds in bad observation, in imaginary experience, and even positive *mala fides*, so have the laws of philosophy and logic scarcely yet found their way into it." "The language of truth is simple and brief, but that is not the language of physic." "Its words have meanings, and the same words have always the same meaning, but this is not the language of physic. The language of error is multitudinous, variable, vague, and unsteady, and this is the language of physic." "If there be a philosophical reader who doubts this, if there be a logician, a man accustomed to evidence, who has not read medical books, let him read, even the most celebrated, and be satisfied."

Should we not look with favor upon him who makes a successful attempt to redeem physic from this reproach, and pardon the minor faults he may have committed in his anxiety to do so; and which may have led him to an opposite extreme? The very best words to express his thought and meaning are invariably selected. To be always sure of making himself fully and clearly understood, he uses what may be considered a redundancy of words, but the proportion of his readers who would be liable to mistake his meaning without them, may not be as small as some will suppose. In our own judgment, however, the faults for which we are apologizing are real. But neither conciseness nor brevity, nor even elegance of style, are the most essential characteristics of a treatise upon a subject like this, and he who is enamored of these only, though in many instances his taste in these respects may be fully gratified, will not waste his time in perusing Tully's Materia Medica.

The principles of practice laid down by the author, and his means of applying them, we have not time to consider. Unless this, the most important subject connected with it, should be taken up by some one else, we may return to it hereafter. Here there will be more room for difference of opinion, and more just grounds for disagreeing with the author than we have found heretofore; though from our observations, since our attention was first turned to the work, we have reason to suspect that logic and learning, and even independence, are not such disqualifications for just that kind of research, observation and experience, that enables a physician to adopt his remedies to the treatment of disease in the most rational and best manner, as they are sometimes represented to be. There is as much novelty and originality displayed here, as in its scientific arrangement. On some points in physiology, pathology, as well as therapeutics, his opinions are very nearly opposite to those commonly received, and it would be strange if, among all the new views it presents, there should be none that will ever be regarded as improvements upon those entertained at present.

J. C.

Art. X.—*De l'exfoliation physiologique et pathologique de la membrane interne de l'uterus.* Par A. Raciborski. Paris: J. B. Baillière et fils, 1857, pp. 80.

Raciborski, the author of several ovological works, has increased his already well-established reputation by a new contribution to medical literature. The work before us treats of some of the most interesting portions of gynæcological science.

The exfoliation of the mucous membrane of the uterus may be considered from a physiological and pathological point of view. The existence of a mucous membrane has long been doubted by some of the most prominent men, such as Chaussier, Ribes, Béclard, Breschet, Morgagni, and Boërhaave; and even for Bischoff it was a difficult task to prove its existence. Some authors considered it to be a serous membrane, owing to the fact that sometimes a serous fluid was found in the cavity of the uterus. Its firm adherence to the deeper layers prevented for a long time a clear knowledge of its true nature. Still by treating a section of the womb with chromic acid, it is easy to recognize three different layers, viz., the mucous membrane, the vascular and the muscular strata. The structure of the uterine mucous membrane is peculiar, as it consists partially of fibrous corpuscula (tissue fibro-plastique), partially of common cellular tissue, with admixture of amorphous tissue, in which the capillaries and, the glands are imbedded. The mucous membrane is covered with vibratile epithelia, which spreads to the middle of the neck. The glands of the neck are larger than those of the body; they are called *glandulæ nabothi;* and if their orifice is closed and their body enlarged by mucus, they are called *ovula nabothi.* Its most striking difference from other mucous membranes is the presence of fibrous corpuscula (tissue fibro-plastique), which are, for the most part, only met with in neoplastic or regenerated structures. Oken was the first author who pronounced that the membrana decidua was nothing but the hypertrophied mucous membrane of the womb. In the very first stages of pregnancy, the mucous membrane or decidua shows a considerable enlargement of the nuclei, of the cellular, and elastic fibres, while the amorphous membrane obtains a granulated appearance. In this thickened membrane the ovulum is often so much hidden during the first days that it is at times very difficult to detect it, even with the aid of a magnifying glass. In other cases the ovulum is only superficially attached to the membrane, and adheres to it by very thin filaments, which sometimes break and let the ovulum fall down, so as to lay upon the internal orifice—a fact which has been proven by evidence (see third observation). Therefore the cavity of the decidua is occasionally found seemingly empty, giving rise to doubt whether conception was present or not. That portion of the mucous membrane which surrounds the ovulum (membrana decidua reflexa), is driven forward while the former is growing larger, but atrophies, at a later period, or only remains at its basis. About the third month, the membrana decidua reflexa also begins to atrophy, and the chief vascular activity is concentrated around that portion of the mucous membrane where the ovulum is attached (membrana decidua serotina). Meanwhile the membrana decidua vera loses its firm coherence with the womb, and serves as an envelope of the ovum *i. e.*, the mucous membrane is exfoliated; and behind this the uterus begins to form a new mucous membrane. The remarkable fact, that the mucous membrane of the cervix does not participate in these alterations finds no explanation by Dr. Richards' researches, who states that it is only the epithelial layer which forms one continuous coat from the body to the neck, while the deeper layers constituting the mucous membrane proper, are interrupted by a horizontal sulcus near the orificium internum.

The regeneration of the mucous membrane may be properly compared with the cicatrization of a wound, normal membrane being formed instead of cicatrized tissue—a proceeding which is observed not unfrequently on other portions of the system.

Raciborski holds that the membrana caduca of mammalia is a mucous secretion, contrary to the opinion of most embryologists. In all normal cases the posterior surface of the placenta is covered with the membrana decidua serotina. [This is not exactly so, as it is only the hypertrophied epithelium which covers the detached placenta.—E. N.] But it happens at times that this section of the former uterine mucous membrane is not exfoliated, and those are the most obstinate cases of adhering placenta.

The second division of this work treats of the *pathological exfoliation* with *new considerations on abortion at the beginning of pregnancy.* This is, no doubt, the most interesting and most original part of the work, as the physiological portion presents not much more than a recapitulation of the now generally accepted views on the subject. It was Dr. Simpson who first of all, in 1847, pointed out the possibility of a pathological exfoliation, in declaring the membrane (like pieces lost during a dysmenorrhœa membranacea) to be nothing but hypertrophied uterine mucous membrane, which fact was afterwards confirmed with the microscope by Lebert, Frericks, Bischoff, Follin, etc.

Up to the present time, only a few observations have been published regarding this subject, while its cause, influence, and consequence upon the organism have not been taken into consideration. The author begins with a review of the published undoubted cases of pathological exfoliation. The first observation is from Morgagni, and though this great physician was unacquainted with the real nature and right explanation of the fact, the description of the case is so true and exact, that every reader is impressed with its real meaning. Up to the present time the pathological exfoliation has been considered as the consequence of an inflammation or an exudation of the mucous membrane. Raciborski admits only one cause, viz., a fertile coitus where the fructified ovulum has been destroyed at the beginning by some pathological process, the membrana decidua being expelled as a heterogeneous body at a later period. Therefore, it is not right to attribute the dysmenorrhœa membranacea to an exfoliation of the mucous membrane. These cases are nothing but an expulsion of coagulated and discolored blood from the womb. In all the authentic cases, as published in our literature, the women in question had had sexual intercourse, and in some the virginity could not be proven. In all cases where the catamenial periods have been mentioned, it could be stated, that between the last term and the time of exfoliation, a longer period than four weeks had intervened, viz., forty days to two months, while previous to this accident, the women had always menstruated quite regularly. Moreover, the expelled membranes looked just like the membrana caduca of the first days of conception, in which very often the ovulum cannot be discovered, owing to its being imbedded in the thickened membrane.

[In these latter considerations the author no doubt goes too far. If a woman has an exfoliation of the uterine mucous membrane five weeks after her last term, why should she not have it quite as well just at her next period? Even the exfoliation, after a fertile intercourse, is nothing but the consequence of a powerful and lasting congestion of the mucous membrane. Why should not menstrual congestion alone be sufficiently strong in some women to cause hypertrophy and separation of the mucous membrane of the womb—an occurrence occasionally observed in other portions of the system? Moreover, the author has no more right to doubt the virginity in the cases alluded to, than every other man has to believe in it. Withal, we are far from considering every instance of dysmenorrhœa membranacea to be an exfoliation of the mucous membrane. I remember having examined with the microscope membranous particles, which were expelled at every catamenial period from a woman laboring under anteflexio uteri, when they were found to consist of nothing but coagulated fibrine. Therefore, the writer concludes that the membranes discharged in dysmenorrhœa membranacea are of different catamenial character in different instances. E. N.]

But it sometimes happens, after the decay of the ovum, that the membrana caduca is not disengaged from the surface of the womb in its full extent, but adhering on some points, it is turned inside out, like an inverted uterus, thus protruding from the mouth of the womb in the shape of a pear, and having all the appearance of a polypus. In other instances, where the membrane remains partially in connection with the womb, it is often expelled after a considerable length of time, thus occasioning the most obstinate menorrhagia, and the blood coagulating around it in different layers, it has been mistaken for a polypus inside the womb. Besides simple sanguineous concretions, it is the ovum itself, with its manifold alterations, that has to be taken into consideration in making a diagnosis of exfoliation. If it is the ovum, there is always a cavity inside the tumor, filled with a liquid, and very often with traces of the fœtus, which never is met with in mere exfoliation. For making a differential diagnosis of an exfoliation from an abortion or old blood coagula inside the womb, it is necessary to use the uterine probe, which in the former case enters very freely and finds the cavity pretty free and easily explorable, while in the latter instances only a very limited space for its movements is left. (Ne quid nimis!) The therapeutical means to be applied in a beginning or partially effected exfoliation are powerful injections of cold water into the womb, in order to produce a perfect separation of the membrane, and Recamier's curette, by which it has to be removed. The author reports one case where he was able to make a diagnosis of imperfect exfoliation, and to apply the named remedies with full success.

After perusing this short synopsis of Raciborski's work, every physiologist and obstetrician will be impressed with the necessity of making a personal acquaintance with the original work itself. It is one of the most interesting articles in our literature. E. Noeggerath.

BIBLIOGRAPHICAL NOTICES.

Art. XI.—*Pathology and Treatment of the Paralysis of Muscular Motion.* By J. P. Batchelder, M.D. New York, 8vo. pp. 62.

Rarely have we perused pages of greater practical interest than these by the venerable President of the Academy of Medicine, and very happily does this little *brochure* display some of the rich fruits of its excellent author's life-long habit of philosophical observation and the study of nature's laws in health and in disease.

After stating his views relating to the pathological and physiological conditions concerned in motor paralysis, and the means of recovery, Dr. Batchelder details ten cases that came under his direction in the New York Hospital, by the politeness of the medical gentlemen connected with that establishment—preferring to publish the record of cases treated in a public institution rather than those occurring in private practice, for the obvious reason, that such cases were observed by many physicians during the progress of cure, inviting the severest scrutiny.

We regret that we have only space for the following brief quotations from this pamphlet :

"We do not consider the paralysis of which we are about to treat, a disease, but the symptom of one which mainly affects the voluntary muscles, or the muscles of animal life. The non-communication of the appropriate stimulus to these muscles by the mind, constitutes the disease of which paralysis is the symptom. The muscles having ceased to act, form the habit of inactivity ; and the mind, acquiescing from necessity or otherwise, contracts the habit of not communicating the necessary and appropriate stimulus to them through the nerves ; so that by the conjunction of these causes, additional morbid conditions of a secondary and somewhat chronic nature, have been induced, of which paralysis is also in this connection a symptom. As the removal of these cures the patient, we shall endeavor to ascertain and settle their pathology, from which we hope to be able to deduce the proper method of treatment. The performance of function induces a derivation of blood to an organ, which in a measure ceases when the function ceases; and the organ diminishes in size as the natural and almost inevitable consequence. This is a general law of the system, to which the muscles of animal life, like all other organs, are subject ; hence they become atrophied in paralysis, or when kept a considerable time at rest from other causes. Thus deprived of blood, their capillary vessels shrink, and what the capillaries of a part do, that will the part as a whole do. The atrophied muscles become shortened, and refuse to be elongated except by force; neither of which would have happened but for this shrinking of the capillaries." * * *

"This state of things may continue after the primary cause of the paralysis has been removed or ceased to operate; but the patient having been quiescent for a time, becomes acquiescent from habit, and will not make the slightest effort to move his limbs—indeed insists that he cannot do it—that it is impossible. He has, as it were, forgotten how to produce the antecedent cerebral change as an act of the will; and the only way to enable him to recover the power or learn the art of doing it, is to cause the members to perform the motions calculated to produce the changes in the brain. The motions first and the changes in the cerebrum next, are the order and method of nature. By this expedient, duly performed and persevered in, he will at length be enabled to reënact the cerebral change, and the movement of the limbs will follow in exact proportion to the energy with which this change in the brain is effected. Both, for obvious reasons, will be feeble at first; but he must be encouraged and helped; when by repetition, the efforts will be more and more vigorous, and the results more and more apparent and satisfactory." * * * *

"The paralytic, then, so far as the paralysis is concerned, is in much the same condition as the infant at birth; and in order to recover the use of his limbs, must go through a course of training somewhat analogous to that to which he was subjected when he first learned their use —his muscles must be reëducated." * * *

"In a paralysis of some duration, the muscles of the palsied limbs are not all in the same predicament. Some are powerless; some are too strongly contracted; others, neither contracted nor powerless, are, nevertheless, quite ready to act, not in obedience to the will, but in opposition to those which can and do act somewhat in accordance with its dictates; but all the muscles, generally speaking, concur in disregarding the volitions of the patient.

"From these different conditions of the muscles, the indications of cure may be deduced with strict logical and pathological propriety. They are :

"1. To restore strength to the powerless muscles.

"2. To overcome abnormal contraction in others.

"3. To obviate or counteract the perverse action of such as act irregularly.

"4. To renovate the will, and reconnect it with the affected muscles. The first three indications point directly to the fourth, which is, in fact, the ultimate object aimed at."

TREATMENT.

"*First Indication.*—To restore strength to the powerless muscles.

"*Second Indication.*—To overcome the inordinate contraction in others.

"As these indications are, to some extent, answered by the same means, we propose to consider them in connection, so far, at least, as the sameness of treatment goes.

"The muscles, in paralysis of the arm from lead, furnish a tolerably good example of both these conditions. The extensors are powerless—the flexors, over contracted.

"In restoring tone to the powerless muscles, we resort, with great prospect of success, to an agent inherent in the muscles themselves, denominated 'passive contraction' by modern physiologists. This power causes a muscle to contract and shorten whenever its origin and insertion have become approximated. Muscles thus circumstanced, after a while resist with great energy all endeavors to elongate them, as every surgeon well knows who has had much to do with dislocations of long standing. In such and analogous cases, each entire muscle accommodates itself to the altered condition which obtains between its origin and insertion. To enable paralyzed muscles to recover their power we avail ourselves of the knowledge of these results, and cause their origin and insertion to approach each other, and keep them in this position for a longer or shorter time, as the case may be, or until the muscular fasciculi have begun to contract and adapt themselves to the change."

Dr. Batchelder closes his pamphlet with a page of very valuable suggestions relative to the means of preserving a vigorous condition of both body and mind, in the decline of life. Long may this noble lover of his profession remain a living example of the truth and practical value of the principles and practice recommended by him.

ART. XII.—*Clinical Lectures on the Principles and Practice of Medicine.* By JOHN HUGHES BENNETT, M.D., F.R.S.E., etc. Edinburgh. Samuel S. & William Wood, New York, 1858. 8vo.

THIS is the second and enlarged edition of one of the most valuable books which have lately emanated from the medical press. It contains over nine hundred pages, full of important, and in many instances, novel ideas, on subjects which will command the attention of every practitioner in medicine. Eulogistic notices are not required to procure for it a favorable reception. No publications on practical medicine are so well received as clinical lectures, and few possess better qualifications for rendering such lectures interesting and useful than Prof. Bennett. The discoverer of the "white cell blood" has inspected the different organs in disease with the same thoroughness which characterized his examination of the circulating fluid, and by the aid of the microscope has assisted in settling many obscure points in pathology. No one devoted to the profession will fail to peruse these lectures, and acquaint himself with the discoveries of so ardent an explorer in the field of medicine.

The first section of the book relates to the "Examination of the Patient," explaining fully the subject of physical exploration, the microscope, its uses, the microscopic appearances of the blood, and the different excretions; in the second section the various exudations degenerations and concretions are fully discussed; the third section relates to the recent changes in therapeutics, and the remainder of the work, containing over six hundred pages, is devoted to the consideration of individual diseases. The book contains complete histories of over two hundred cases, in a large proportion of which post-mortem and microscopic examinations were made, and its value is greatly enhanced by the large number of woodcuts, over four hundred, representing for the most part microscopic appearances.

ART. XIII.—*The Physiological Anatomy and Physiology of Man.* By ROBERT BENTLEY TODD, M.D., F.R.S., and WILLIAM BOWMAN, F.R.S., late Professors of Physiology, and General and Morbid Anatomy in King's College, London. Complete in one volume, with two hundred and ninety-eight illustrations. Philadelphia: Blanchard & Lea, 1857, 8vo., pp. 926.

THE title of this work has long been familiar to the profession, as nearly fifteen years have elapsed since the authors began their publication. But during that long period, no branch of medical science has made such rapid advancements as physiology. The question may well be asked, how can a work of physiology written fifteen years since, be of any value to the student of to-day? Indeed, it may justly be said, that within that time true scientific physiology has been established. The theories of that day, so crude and little plausible as scarcely to obtain credence among their own projectors, have yielded to positive facts and well established systems. But this is not all; during that period the bounds of physiological science have been immensely extended. Not only have the fields of investigation, then so imperfectly wrought, been thoroughly cultivated, but old landmarks have been removed, and a boundless expanse has been admitted to the domain of physiological science.

On examining the work before us, we find that its learned authors have not been unmindful of the disadvantage at which they labored. This they have striven to overcome by greater care in the study of each individual subject, and more thorough personal investigation. What appears, therefore, at first to be a necessary defect in the work, proves to be an actual advantage. The names of Todd and Bowman have long been familiar to the student of physiology. In this work we have the ripe experience of these laborious physiologists on every branch of this science. They gave each subject the most thorough and critical examination before making it a matter of record. Thus, while they advanced tardily, apparently in their publication, the work thus issued was a complete exponent of the science of physiology at the time of its final appearance.

We can, therefore, recommend this work as one of the most reliable which the student or practitioner can consult relating to physiology.

PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrics and Diseases of Women; prepared for the NEW YORK JOURNAL OF MEDICINE. By E. NOEGGERATH, M.D., Physician to the Female Department of the German (Canal street) Dispensary, New York.

I.—ANATOMY AND PHYSIOLOGY.

1. *Etudes anatomiques et anatomo-pathologiques sur la statique de l'utérus.* Par Dr. F. A. ARAN. (Archiv. Génér., Feb. and March, 1858.) Under the name statique of the uterus, Dr. Aran comprises its situation as far as it is established by its anatomical condition, and as far as it is liable to be changed by different circumstances. Thinking that even now the discussion in regard to this subject had by no means come to a satisfactory result, the author intends to review the opinions current, and to add new observations and opinions of his own. Of the different ligaments believed to sustain the uterus in its position (two lateral, one anterior, one posterior—plicæ Douglasii), he thinks the latter alone deserve the title of ligament, because of their fibrous texture. His inquiries in regard to these structures differ somewhat from the description given of them by the most reliable anatomists: 1. It is not the inferior portion of the uterine neck from which they start, but from the point where the collum and corpus uteri meet. 2. Instead of two ligaments there exists in reality but one, because the inner and posterior fibres form but one continued layer, without any line of demarcation, while the middle strata cross each other in the median line, and the external bundles are mixed up on each side with the uterine tissue itself. 3. These ligaments do not always surround the cavum recto-vaginale, *i. e.*, they do not comprise in every instance the rectum in their posterior department. 4. They do not stop in the middle portion of the pelvis, but extend their ramifications as high as the fourth, and sometimes the fifth, lumbar vertebra. Moreover, the direction of the posterior ligament is not from below upwards, but it runs in the opposite direction; nor does it extend in one straight line from the uterus to the sacrum, but near the latter point it spreads outwards. Therefore its influence upon the position of the uterus is to prevent descent towards the outlet of the pelvis, retaining it over the neck near the os sacrum. These ligaments almost disappear during pregnancy, while they exhibit an enormous state of hypertrophy when the uterus is retroverted. The ligamenta rotunda are not intended to keep the uterus in its elevated position, but merely prevent the fundus from falling backwards; therefore the operation of shortening the round

ligaments, as proposed by Dr. Alquié for curing prolapsus uteri, would prove a failure. Notwithstanding Dr. Stoltz's experiment, who removed the entire vagina without producing an alteration in the position of the womb, it seems probable that the vagina has some influence in retaining the uterus in its position, as is proven by the good result following artificial constriction of the vagina for the purpose of curing the falling of the womb. Dr. Aran, far from underrating the importance of the vesico-uterine ligament as a means of influencing the position of the uterus, cannot agree entirely with Prof. Virchow's views, who seems to consider the adherence of the uterus with the bladder to be one of the chief points of its support. The conclusions drawn from these remarks are as follows: 1st. The uterus is suspended in the pelvic cavity of the adult female by a *complet* of different means of suspension, composed of the insertions of the bladder and vagina in front, of the vagina and the posterior ligaments in the rear, and laterally of the vagina and the lateral fibres of the posterior ligament. 2d. The combination of these means of suspension establishes a real axis—"*axe de suspension*"—around which the movements of the uterus are completed. The relation of the uterus to this "axe de suspension," is not yet fully ascertained. In following the natural development of the uterus from the very first months of existence, it is an acknowledged fact, that in fœtal life the body of the womb is always somewhat bent upon its neck, which flexion disappears the more the female advances in years, and above all it is the pregnant state which corrects this flexion of the uterine body. Dr. Gosselin found, in forty-eight post-mortem examinations of women who had never been pregnant, twenty-seven more or less decided anteflexions of the womb, eighteen perfectly straight, and three dubious cases. Dr. Aran found, among nine young virgin females, from 17 to 27 years of age, six decided anteflexions, two retroversions, and one straight uterus; of ten married sterile women, there were six below 24 years of age with decided anteflexions, two with anteversions (one of them 48, one 49 years old), two with an almost straight uterus (18 and 55 years old); of twenty-one women who had borne children, seven exhibited unmistakable anteflexion (23 to 27 years old), three presented a slight inclination in front (33, 40, and 57 years old), two showed retroversion (age, 28 to 40 years), in four the axis of the uterus followed that of the upper pelvis (ages, 26, 28, 33, and 44), in five cases the womb was retroverted (age, 22, 25, 40, 44, 45). In all of these cases no traces of uterine disease had been exhibited during life. This shows that 50 per cent. of the examined (post-mortem) women had an anteflexed womb, the cases belonging almost exclusively to young women and those who had never borne children. Therefore, in childhood and puberty the axis of the womb does not follow the axis of the upper pelvis, but is more or less inclined in front, which disappears the more the woman advances in years, and after she has been pregnant. In regard to Dr. Cruveilhier's opinion, that the axis of the uterus in the living female changes with the position of the body, Dr. Aran thinks that this state of indifferent axis is not the rule, but the exception, it being only met with in those cases where the means of suspension around the uterus are in a state of weakness, such as occurs in consequence of repeated confinements. One thing is certain, that the uterus of *healthy females* may be found, in anteflexion or forward inclinations, quite straight, and in the direction of the upper pelvis, or in an indifferent position, following simply the laws of gravitation. The fœtal anteflexion of the uterus, Dr. Aran considers to be the result of the pressure of the abdominal viscera upon the extremely soft and flexible body of this organ. In more advanced age, the walls of the body of the uterus thickening, and the point of union between body and neck settling lower down, the condition favoring a state of anteflexion disappears. In those cases where anteflexion remains after the years of puberty, and, what is very rare, after pregnancy, the shortening of the round ligaments may be accounted for, in consequence of which the uterus is unable to be sufficiently thrown backwards by the bladder when filled with urine. There are two kinds of uterine obliquity ; in the first instance the neck remains in its position, while the body is bent upon it towards the right or left side ; in the second instance, one of the superior corners of the uterus is drawn upwards and in front, the other side of the womb being placed in the opposite direction ; so in both cases the corresponding round ligament, and generally the utero-sacral ligament, are shortened. The greatest difference between the two round ligaments, as observed by Dr. Aran, was 95 mm. ; the greatest number of these lateral inclinations is found among children, which condition seems to disappear as they advance in years. From these researches it appears that it is wrong to consider and treat anterior and lateral inflexions in young females, as pathological conditions, especially if they do not give rise to dysmenorrhœa or sterility in more advanced years.

2. *Dr. O. Speigelberg of Gottingen on the nervous centres and the motion of the uterus* (*Henle and Pfeuffer, Ztschr.* 2, 1858).—An analysis of a great number of experiments upon forty living animals in order to answer the question, What are the causes and the seat of uterine movements ? led the author to the following conclusions : 1. The stoppage of the circulation, and consequent stasis of blood, is the cause of the peristaltic movements of the uterus. As long as the heart is in activity, there are no movements seen at all, or they are very trifling. 2. Through the nervi vagi no excitations are conducted to the uterus. 3. By irritation of the medulla oblongata, uterine movements can be effected. 4. The cerebellum is the nervous centre which chiefly controls the movements. 5. From every point of the spinal cord, but more especially from its lumbar and sacral portions, movements of the uterus can be produced. 6. The excitations starting from the central organs travel downwards along the medulla oblongata and the spinal cord, and proceed through the rami communicantes of the sympathetic, and through the sacral nerves to the uterus ; and likewise excitations rising from the uterus are produced through the same channel. As to the order in which the uterine contractions follow, Dr. S. believes from his experiments, that first of all the mesometrium begins to contract, in consequence of which the uterus is fixed towards the pelvis ; after

this the vagina and the cervix uteri contract; this circular contraction proceeds up to the fundus uteri, and from thence returning, presses the fœtus downwards, while the cervix and vagina are enlarged.

3. *Dr. Luschka on the liquid portion of the Graafian follicle* (*Wurtemb. Natur. Jahresh.* Jahrg. 13).—The walls of the follicle consist, first, of a membrane abundantly imbued with blood-vessels, the stroma of which is a cellular tissue with elastic fibres, and which is separated from the inner epithelium by an amorphous membrane, being attached externally to the stroma of the ovarium by a thin cellular tissue: secondly, of the epithelium—this consists of a great quantity of round or angular cells in the different stages of development; they represent what is called the *stratum granulosum.* These cells are most numerous on that portion of the sac where the ovulum is situated, which they surround on all sides, so that here a protrusion is formed into the cavity of the follicle, generally called cumulus proligerus.

The rest of the Graafian follicle is filled up by a yellowish albuminous fluid—the liquor folliculi Graafiani. This liquor takes its origin from the cells of the stratum granulosum, as can be proven by microscopical examination of the different stages of development of these cells. First of all a nucleus is formed out of the blastema of the blood, around which molecular matter is deposited, and from which the amorphous wall and the contents of the cell are separated. The most superficial ones are the most developed.

Their granular contents are changed into a clear albuminous substance, from which the cells become larger and pellucid. These fluid contents pass through the walls of the cell in the shape of clear oily drops, which dissolve after some time in water. In this case the cellular wall contracts, to be filled anew. In other instances the entire cell is dissolved, without leaving any trace, or with continuance of the nucleus, which serves for the formation of a new cell. But not every one of the cells participates in the formation of the liquor, some passing into fatty degeneration, some undergoing no change whatever. This fluid is the original blastema from which the ovulum originated; it further serves as nourishment while the ovum is being developed; and lastly, being increased by direct extravasation from the congested blood-vessels during the catamenia, it expands and finally ruptures the Graafian follicle. The ovum thus set free has to subsist for some days on its own means; for this purpose it takes along a certain number of those cells which cover it, in the form of what is generally called *discus proligerus.*

II.—PREGNANCY AND LABOR.

1. *Dr. L. Gros on the application of pepsine in obstinate cases of vomitus gravidarum* (*Bullet., Génér. de Thérap.*, Feb. 1858).—The author reports seven cases, partially from his own experience, partially from that of other practitioners, where the administration of pepsine cured the vomiting of pregnant women, in some instances where all other remedies had failed to make the slightest impression on the disease. Far from advising its application as a general rule, Dr. G. recommends it for all those cases where the stomach has participated actually in the

morbid condition, be it by an alteration of the secretory activity, or in consequence of its being constantly called to unnatural activity.

2. *Dr. Merteus of Neviges on two Cæsarian operations, with happy result for the mother* (*Organ für die ges Heilk.* 6 Jahrg. 1 H. p. 31).—The cases reported go to show what many obstetricians can confirm by their own experience, that often the most seemingly unfavorable cases result in general satisfaction.

Case 1.—A primipara, 30 years of age, perceivéd the first labor pains on November 25th, 1856.; but during the progress of labor the head became so firmly incarcerated in the pelvis, that the enormous caput succedaneum prévented a closer examination of the pelvic diameters. It was impossible to apply the forceps, and when the child was ascertained to be dead, his head was perforated and diminished, after which the accoucheur was able to perceive that Cæsarian section was even now the only means left for delivering the woman. This was performed in the linea alba. The patient recovered finally, notwithstanding her taking cold three days after the operation, in consequence of which, an obstinate cough, with swelling and tenderness of the abdomen set in. She left her bed after four weeks.

Case 2.—A multipara, who had been delivered two years previously by the Cæsarian operation, was taken sick on January 6th, 1856. The uterus was now situated in a sac formed by the abdominal wall, and extended downwards to the middle of the thigh; the cut ran alongside the linea alba. The womb being very thin, the incision touched the placenta, which was removed immediately with the living child. The patient left her bed ten days after the operation, in consequence of which she caught cold and was taken with inflammation of the left ovary, after which an abscess formed and broke in the vaginal region. The patient also recovered from this accident in three weeks.

3. *Dr. Grimsdale on the use of kali chloricum in pregnancy* (*The Liverpool Med. Chir. Journal*, July 1857).—It often happens that fœtuses reach near the full term when they die without any ostensible cause, or are born alive in such a condition that they perish soon afterwards. Such accidents sometimes happen in every recurring pregnancy, and we are at a loss for the reason. In these instances the author has found the kali chloricum of great use. A healthy looking woman, 24 years of age, bore dead children, in four previous pregnancies, all of which exhibited a yellowish skin. In her fifth pregnancy she was delivered of a weakly child with the same tinge and an enormous placenta and liquor amnii; this child died seventeen days after birth. In her sixth pregnancy she took the said remedy from her fifth month up to the full term, when she had a full-grown, strong, living child. Another woman, 25 years of age, who had always enjoyed good health, gave birth to four dead children, who died shortly before labor commenced. During the following pregnancy she took twenty grains of chloride of potash for four months, and had a healthy strong child. In a third case, a weakly, hysteric woman was delivered in her sixth month of a putrid fœtus; the placenta was partially degenerated. In her second pregnancy she took thirteen grains of kal. chloric.

from the third month, but had to discontinue its use on account of violent headache, owing to its administration. She again had a dead child. During the following gestation she took from three to five grains daily, which she bore well, and all went on favorably, when she had a heavy fall from a wagon, which resulted in the miscarriage of a healthy child, and healthy placenta; in her fourth pregnancy she took the same remedy, and gave birth to a full-grown, living, healthy child. Another woman had been delivered of dead children seven times. During her following gestation she partook of this remedy and gave birth to a healthy living child in her sixth month, in consequence of hard working. [Prof. Simpson has recommended the kal. chloric. before in those cases, where the cause of death is owing to disease of the placenta, such as fatty degeneration, etc. E. N.]

4. *Prof. Hohl on starvation of a child from paralysis of the facial nerve in consequence of a forceps operation (Monatsschrift für Geburtskunde.* Oct. 1857.)—In the report of the lying-in hospital at Halle, a case is related in which the death of a new-born child was brought about in a very unusual manner. A woman, in whom labor was arrested through complete absence of uterine contraction, was delivered by the forceps, the head lying in the pelvic cavity. In consequence of the pressure of the left blade of the forceps, there resulted a paralysis of the facial nerve of the left side, which resisted all treatment. By this the infant was hindered from suckling, as all the milk ran out of the corner of the mouth on the paralyzed side. Everything, prior to being swallowed, had to be placed within the grasp of the muscles of the pharynx. The child was thus gradually reduced by atrophy and died on the twelfth day.

5. *Prof Hohl on a case of incision of the labia majora with rupture of the perineum (Monatsschrift für Geb).*—In a case in which this operation was resorted to by Prof. Hohl in the lying-in hospital at Halle, although five incisions were made, the perineum was torn notwithstanding. "The incisions," says Hohl, "had no other advantage than to make so many wounds the more." [This operation, proposed first by Michaelis in 1797, and not as the reporter of the British and Foreign Review has it, by Scanzoni, is of undeniable value for the said purpose, provided the incisions are made sufficiently large, as the writer can testify by his own experience. Prof. Hohl's communications have to be received *cum grano salis*, as he is too much inclined to criticise and underrate everything that emanates from, or is advocated by the Vienna school. E. N.]

Dr. Schuegel, of Prague, on osseous vegetations of the pelvis, which are apt to shorten the conjugata (*Wien. Med. Wochenschr.* 46, 1857).—While the physiological osseous protuberances are small and of no importance to the obstetrician, the pathological ones, although of rare occurrence, are not only interesting but very dangerous, owing to the enormous size they often attain. The author discovered sixty osseous excrescences on the posterior of the ossa pubis among three hundred pelves examined; their height was from 1‴ to 3‴. In some cases there were found excrescences on the os sacrum, and the last lumbar vertebra, besides those of the ossa pubis, resulting in a shortening of the antero-posterior diameter, of from 4‴ to 8‴. In one instance the author found very extensive osseous growths in a pelvis of a woman 70 years old, in whom traces were discovered of previous syphilis. The rest of the bony skeleton was free from disease. The body and rami descendentes of the os pubis were covered with a large convex osseous tumor which protruded into the brim of the pelvis as much as 10‴. It was 1″ 2‴ high, and 1″ 5‴ broad, consisting of an outer, dense, white layer, and an inner spongy substance. These different layers formed a perfect continuity with the respective strata of the os pubis. The posterior wall of the symphysis was overbridged by the tumor. The antero-posterior diameter was 3″ 2‴. On the fourth and fifth lumbar vertebra small osseous tumors were also observed. These growths upon the anterior surface of the lumbar vertebræ, as often met with by the author, have been considered as pathological structures in consequence of syphilitic and puerperal periostitis.

III.—PATHOLOGY OF NON-PREGNANT WOMEN.

1. *Leroy de Méricourt on partial blue or black coloration of the skin in women (Arch. gén.*, October, 1857).—By an analysis of Drs. Young's, Wilson's, Billard's, and Neligan's cases, to which five new observations are added, the author comes to the following conclusions : The disease, which has only been observed among females, consists of a black or blue color, of one or both eyelids, which in some instances spreads over the face and other parts of the body. The disease is often connected with irregularities in the catamenial functions, with dyspeptic disorders, or blood-spitting. The sputa and the substance thrown up from the stomach contain a peculiar blue matter. The spots in the face increase in intensity, while the patients sojourn in hot rooms, after excitement, bodily exercise, and congestions of the head ; while the color gets lighter in the morning and in the cool air. A piece of linen rubbed over the spots takes a blue tint, while the spot itself loses part of its color, which is renewed after five or six hours. The washing or rubbing of the affected place is connected with pain. The inner corner of the eye and the lower lid are generally first taken with the disease, from whence it spreads over the cheek, nose, and so on. The patients look as if they had omitted washing themselves on the places affected. The duration of this complaint was from three months to seven years. Nine out of the ten cases were observed in sea-towns. In regard to treatment, the general state of health, disturbances in the menstrual courses, etc., have to be attended to. Till now, no local remedy has been found of any influence. The names proposed for the disease are : *Blepharomelanosis, Cyanopathie cutanée, Stearrhœa nigricans.*

2. *Dr. Sigmund on the application of caustics upon the inner surface of the uterus (Wien. med. Wochenschr.* 40 and 43, 1857).—This treatment was applied in those cases of blennorrhœa and pyorrhœa uteri which resisted the ordinary course of treatment. The *application* of caustics upon the interior walls of the uterus is connected with many difficulties, and the greatest precaution has to be observed in their use.

The author generally proceeds in the following way: After having dilated the cervical canal by compressed sponge-tents, he commences cleansing the inner surface by injections of lukewarm water, which is permitted to flow off through the mouthpiece of the syringe—a double current. He then dries the cervical canal with a brush made of plugged linen. He then injects the caustic fluid (nitras argenti, cupri sulph., zinc. chlorat., or perchlorid. ferri) through a small glass syringe, leaving the mouthpiece with double canula in the womb till all the fluid has escaped. In applying solid caustics to the inner surface of the uterine body, the cervix has to be avoided as much as possible, in order to prevent a subsequent contraction of its cavity. The cauterization being over, the neck of the uterus, as well as the vagina, have to be covered with a medium-sized cotton plug, which ought to be changed, and the parts cleansed every eighth hour. The cauterization is often followed by an increased excretion of mucus or pus, occasionally mixed with blood; by dysuria or costiveness; pains round the lower part of the abdomen or os sacrum; by metritis or peritonitis. These symptoms have to be promptly attended to; and in doing this the author has never seen a fatal result.

3. *Dr. Smith Warner on a case of total occlusion of the vaginal canal for two years—Operation—Death* (*Charleston Medical Journal*, November, 1857).—A negress, aged twenty-two, had two years previously been delivered, after a labor of seventy-two hours' duration, of her first child. She recovered slowly, but had no return of the catamenia, although there was much constitutional disturbance at each monthly period. On examination, there was found no appearance of the vagina, perfect adhesions extending from the fourchette to the meatus urinarius. The uterus was found full by rectal examination, having the weight of a womb three or four months advanced in pregnancy. The operation resorted to consisted in incisions made in the track of the cicatrized tissue, in order to reach the os uteri. A canal was opened seven inches in depth; but the os uteri was not exposed, nor could its exact position be determined. There seemed to be nothing but a thin, distended membrane, forming a wall between the end of the finger and the fluid of the uterus, which lay at the bottom of the artificial vagina. This was punctured by a bistoury, and many ounces of dark menstrual secretion escaped. A silver canula was passed through the opening, which had to be enlarged. This opening afterwards closed up, but the artificial vagina remained open. The uterus was therefore tapped a second time; the canula intended to be left in the new opening, however, slipped out; the trocar was introduced again, with a view to the replacement of the canula. During this attempt, a sudden motion of the patient, and excessive pain, made the operator fear that the trocar had passed through the uterus. The poor woman died of peritonitis on the third day. No post-mortem examination was made.

[This case forcibly illustrates the difficulties and perils of the operation for establishing a new vagina and restoring the natural channel for the catamenia, in cases of extensive adhesions; and its communication is more valuable than a hundred records of successful operations.
E. N.]

4. *Dr. H. Oldham records two cases of retention of the menses relieved by puncture through the rectum, in Guy's Hospital Report.* The first was the result of congenital absence of the vagina, the second of closure of the vagina after labor, by adhesion of its walls and cicatrization. In both cases the operation was successful; and in the former the patient continued to menstruate regularly per rectum.

5. *Dr. Breslau on a case of perfect incontinentia urinæ, cured by the removal of both hypertrophied nymphæ.* (*Scanzoni's Beitrage zur Geburtskunde.* B. 3, 1858).—A woman who suffered from constant stillicidium urinæ since her last confinement, complained of a very distressing irritation around the pudenda, and a feeling of bearing down in the lower pelvis. When examined, the circumference of the external genita's and the inner surface of the thighs were found excoriated, very painful to the touch and drenched with urine. Both nymphæ were considerably thickened and several inches long, while the orifice of the urethra was enlarged, so as to admit the introduction of the fifth finger. A vaginal examination discovered nothing but slight leucorrhœa. Therefore Dr. Breslau thought that the enormous hypertrophy of the nymphæ had a paralyzing influence upon the urethra in dragging the latter constantly downwards. This was confirmed by the report of the patient, who felt the greatest distress when she was in an upright position. Under this impression, Dr. B. removed one of the nymphæ by the écraseur, and the other some time afterwards by galvanocaustic. The patient left the hospital entirely relieved of all her ailings.

6. *Dr. Gustav Simon. An analysis of* 61 *cases of ovariotomy, performed in Germany* (*Scanzoni, Beitr. zur Geburtsk.* B. 3, 1858).—This review of operations performed by German surgeons has been prepared with a great deal of care and judgment, in order to establish the true value of the operation. It contains not only those cases which have been published previously, but besides, 23 cases are added which were communicated to the author by private letters, mostly from the operators themselves. In reporting each case, he does not confine himself to short notices, but gives a history of every one of them. The results of the operations are divided under three heads, viz.: 1. Operations followed by a radical cure. 2. Operations resulting in death. 3. Operations from which the patients recovered at first, the ultimate good result of which was only temporary, dubious, or of no consequence at all. In the latter division are counted those cases where the operation had to be given up in consequence of too strong adhesions or a wrong diagnosis, or where the patients died at a later period from the operation, or from the original disease.

In all the former statistics (American, French, English) the cases coming under No. 3 are reported among the successful operations. Dr. Simon's analysis should therefore claim the undivided attention of the profession. Moreover, as most of the operations were performed at a recent date and by eminent surgeons, good diagnosis, scientific performance of the operation, and skillful after-treatment, were commonly secured.

Results: Of 61 patients operated upon, 44 died immediately after the operation, or $72\frac{8}{61}$ per cent. In 5 patients the operation was of transient or no benefit at all, and only 12 were radically cured, or $19\frac{41}{61}$ per cent. These results are by far less favorable than those of former statistics, and, from a comparison, ovariotomy is more dangerous than the Cæsarian section, because only 63 per cent. died in consequence of the latter, according to Dr. Kaiser's statistics, or about $\frac{2}{3}$ per cent., according to some other authors. (See Naegele's *Geburtsk.* B. 2.)

7. *Dr. C. Mayer on hypertrophy of the uterine neck as complicating prolapsus uteri and its treatment* (*Monatsschrift f. Gebr.* March, 1858).—At a meeting of the Berlin Obstetrical Society, Dr. Mayer read a paper on the removal of the uterine neck for the cure of prolapsus. In those cases of falling of the womb which are accompanied by enlargement of the neck of the uterus, every sort of mechanical treatment is contra-indicated, partially because the pessary cannot be placed in a fit position, partially because in most cases it can be endured only for a short time, owing to the great pain following its application. The best and safest remedy for this hypertrophy is amputation of the neck, which has been executed several times by Dr. Mayer. In performing it, the womb is drawn downwards as far as possible by strong hooks, and the diseased portion removed by the knife. This is generally followed by profuse hemorrhage, which is promptly arrested by the actual cautery. The after treatment is that of a plain cut wound ; pledgets of lint, well covered with oil, are applied to it ; the vagina is to be cleansed frequently by injection ; the wound to be brushed over with a solution of nitrate of silver, and the womb, which generally contracts after the operation, to be retained by a lint plug.

These views were illustrated by the report of a number of cases in which this operation was performed, and have proved successful. In a discussion which followed, it was suggested and accepted, that these operations might have been performed, just as safely, if not more so, by the écraseur.

[That the écraseur is a good thing, generally speaking, we are satisfied. Its application is now in the very height of fashion ; but when the excitement has cooled down, its use will be restricted to the proper cases. The writer is of opinion that the amputation of the neck of the uterus for curing prolapsus, when executed by the knife and actual cautery, will be followed by better results than when performed by the écraseur. In the cases referred to, the entire womb participates more or less in the hypertrophy of the neck, and therefore, a good depletion following the cut, and the application of so strong an agent as the hot iron, must be of good service to the remaining diseased portion, while the écrasement is followed by scarcely any reaction. E. N.]

8. *Du phlegmon péri-utérin.* By Dr. Gallard. (*L' Union Méd.*, Feb., 1858).—The phlegmon periuterin presents itself in three different forms : the acute form, the chronic form, and the subacute, or chronic with periodical exacerbations. Of these different turns which the disease may take, that of a thoroughly chronic character is very rarely seen, and its existence even not acknowledged by some authors, such as Gallard. From an analysis of 53 observations, the author considers

the following circumstances as the most frequent causes of the disease: confinements, miscarriages, previous inflammation, the menstrual congestion, over-exertion, often repeated connection, metrorrhagia, leucorrhœa, inflammation of the uterine or vaginal mucous membrane. By vaginal examination, one may find a pulsating tumor, with increased temperature, behind the cervix, or a circular soft ring, or a diffused exudation, which surrounds the womb so as to render it immovable and fixed in the small pelvis; by examining through the rectum, one is able to trace the limits of the affection; by a combination of both, it is possible to appreciate the state of tension and thickening of the recto-vaginal sac. The different affections which may be mistaken for the disease, are metritis, oöphoritis, hematocele retro-uterina, the different dislocations of the womb, accumulation of fæces in the rectum, and fibrous tumors.

In regard to treatment, the symptomatic metrorrhagia often resists the most powerful remedies. The plugging has to be avoided as much as possible, while the tincture of cinnamomum, as prescribed by Gosselin, has been found to answer very well, if administered in large doses.

9. *Dr. Gallard on the causes, seat, and treatment of hematocele retro-uterina.* (*L'Union Méd.*, Feb., 1858).—The knowledge of this affection is of quite recent date. Before the discussion of the Sociéte de Chirurgie, in 1851, only few observations, besides that of Ruisch and Deneux, had been published. In 1848, Dr. Bernutz, while reporting a similar case like that of Ruisch, offered the following explanation for the origin of these blood-tumors: If the menstrual blood is retained in the uterus by some cause or other, it flows back through the Fallopian tubes into the abdominal cavity. Dr. Gallard believes that this, far from being the general rule, may happen in a few exceptional instances. In 1855, Dr. Laugier read a paper on this same subject before the Académie des Sciences, in which he proposed the following explanation : The ovarian congestion is always the predisposing cause ; the spontaneous rupture of a Graafian vesicle, and the accidental rupture of some ovarian vessels, are the occasional causes. The ripening of a Graafian vesicle is accompanied by a certain physiological congestion, and its rupture is followed by a slight hemorrhage, the result of which is the corpus luteum. If the congestion is unnaturally strong, and if a permanent or accidental predisposition to hemorrhage is present at the same time, a larger quantity of blood will be discharged and deposited into the retro-uterine peritoneal cul-de-sac. During the interval of the catamenial courses, the hemorrhage will stop, but return at the next period. In other less frequent instances, the ovary is the seat of a strong congestion, produced from often-repeated excitements, or pregnancy, and especially so from extra-uterine conception. In this state of things, a fall, or an insult, or a long walk, are sufficient to rupture the turgid ovary on its point of least resistance—that is, where the blood-vessels enter its texture. In consequence, a certain quantity of blood will be discharged into the cellular tissue of the ligamenta lata, and if the hemorrhage is abundant, one of the peritoneal folds

will rupture, and the blood enter into the abdomen. These views are fully indorsed by Dr. Gallard. The obliteration of the Fallopian tubes has been pointed out as one of the causes of pelvic hematocele. Still the author considers this conclusion as resulting rather from inflammatory action following the hemorrhage.

The tumors in question are at times of intra, at times of extra-peritoneal origin, and in a few instances they start without the peritoneum, and enter suddenly into its cavity. During life it is generally impossible to diagnosticate their exact seat; still Dr. Huguier thinks that a bluish-red color of the vulva is a valuable sign for extra-uterine tumors. Dr. Prost, in a recent article on this subject, holds that elevation of the uterine neck indicates an intra-peritoneal location, while its depression proves their extra-peritoneal character; but as a general rule, the uterus stands neither higher nor deeper.

No satisfactory rule has yet been laid down for the treatment of these hematoceles. Lately the bistoury or trocar has been employed in cases demanding their use; but practitioners are cautious of surgical interference, on account of the evil events which it frequently gives rise to. Yet some of the most menacing cases have healed by resorption, or by evacuation into the rectum.

10. *Dr. Herzfelder on retro-uterine hematocele.* (*Monatsschrift für Geburtsk*, October, 1857.)—M. St. ——, aged eighteen, having always enjoyed good general health, but suffering from irregular menstruation, was admitted into the hospital with acute pains in the rectum and sacral region, which were relieved only by rest in a horizontal position. Examination revealed a round, somewhat tense, painless swelling, stretching from the pelvic brim to a point midway between the ensiform cartilage and umbilicus. It was about seven inches wide, and lay rather more on the right side. Vaginal examination revealed a conical swelling, with the apex downwards, quite filling the right pelvic half, and narrowing the vagina very much. The meatus urinarius was drawn up under the pubic arch. This swelling was distinctly fluctuating, and ulcerated at the lower end. By pressure from without inwards, the swelling was movable. The absence of previous inflammation, the mobility of the tumor, the age and strength of the patient, excluded the idea of abscess, caries, carcinoma, fibrous tumor of the uterus, and ovarian cyst. There only remained the probability of a uterine hematocele, that is, a menstrual effusion of blood into the cellular tissue around the uterus. Puncture verified the diagnosis. About a pound of tenacious, dark-red blood was evacuated, after which the patient quite recovered, so that at the end of four months no fresh excretion was observed.

[Though many points in regard to diagnosis and definition of hematocele are wanting in the author's record of the case, it is an important addition in regard to the question of treatment. E. N.]

Report on the Progress of Infantile Pathology and Therapeutics; prepared for the NEW YORK JOURNAL OF MEDICINE. By A. JACOBI, M.D., Physician to the Children's Department of the German (Canal street) Dispensary of the City of New York.

I.—DIGESTIVE ORGANS.

1. *New operation for hare-lip (London Lancet,* Am. ed., 1858, p. 413).—Allen Duke operated on four children, whose ages varied from six weeks to five months, in the following manner: "the edges pared, not in the usual way, but by an oblique incision from before backwards, slightly concave, and the reflecting-bands of mucous membrane, freely divided, are to be brought neatly together by two or more sutures, each armed by two curved needles, which are to be introduced immediately under the skin, carried completely through the remaining thickness of the lip, and firmly tied *internally*. To facilitate the removal of the two upper ones, the ends of the sutures should be brought out at the angle of the mouth, and secured externally by adhesive plaster, strips of which are to be applied the more firmly to bring and retain in contact the skin. The sutures may be safely removed in the course of a few days. Should there be a fissure of the jaw, and any portion unnaturally project, it should not, as is usually recommended, be entirely cut off, but partially severed, the edges pared on both sides, and neatly adjusted by sutures, in order to fill up the vacancy, and preserve the natural rotundity of the forepart of the jaw, previously to operating on the soft parts."

2. *Death by suffocation after the operation for hare-lip.*—Professor Busch, in his book on "Surgical Observations" (1854), directed the attention of the profession to the fact, that infants, accustomed to breathe while the mouth is closed, through the large abnormal opening, keep the mouth closed also after the operation is performed, and are subject sometimes to fits of suffocation. Such a case is reported by Prof. Volkman (*Monatsschrift für Geburtskunde und Frauenkrankheiten,* 1858, No. 5, p. 353) which resulted in the death of a boy of one year of age. Dr. Gurlt has seen similar cases.

3. *Atrophia.*—Dr. Küttner, of Dresden, publishes (*Journal für Kind.*, 1858, March and April, p. 184), some valuable remarks on what he prefers to call dystrophia of infants. Genuine dystrophy, pædo-dystrophia, pædatrophia, is the low state of nutrition and the general exhaustion, which are caused by insufficiency of food, either as to quantity —simple dystrophy—or as to quality—dyspeptic dystrophy. This genuine dystrophy differs much from the cases of emaciation and exhaustion which are merely symptomatic, and the secondary consequences of some local affection of the digestive or respiratory organs, or of syphilitic or tuberculous etc. dyscrasies; in dyspeptic dystrophy the author recommends, as a tonic and stomachic, eight to ten drops of Malaga, Hungarian, or port wine, to be taken three or four times a day.

4. *Atrophia in consequence of chronic intestinal diseases; atrophia en-*

terica.—Dr. Lederer, of Vienna, (*Wiener Medicinische Wochenschrift*, 1858, No. 17, p. 276), recommends the cautious use of opium in almost all the symptoms of enteric-atrophy, particularly where pain and sleeplessness are injuring the strength and recovery of the patients. Sometimes warm poultices, applied to the abdomen, and warm baths, have the same favorable effect. Diarrhœa requires the use of nitr. arg., nux vom., and tann. ac. The best food for small children is breast milk, raw beef is digestible only in the beginning of the disease; carrots are more injurious than wholesome. Baths with milk, beeftea, also the embrocation of liquid fats have a good effect.

5. *Tænia solium.*—Dr. Paasch, of Berlin, publishes (*Journ. für Kind.*, 1858, March and April, p. 207), the case of a child 21 months old, who suffered for six days, from the symptoms of what seemed to be a severe intestinal catarrh, which were prescribed for. On the following morning a complete tænia, head and all, was removed with the fæces.

6. *Temporary paralysis of the cæcum.*—Prof. Clar, of Gratz, (*Jahrbuch für Kinderheilkunde und Physische Erziehung*, 1857, ii., p. 79), publishes an article, from which he draws the following conclusions: first, a frequent cause of typhlitis and perityphilitis is the temporary paralysis of the cœcum and vermiform process. Second, therefore a cure before the beginning of inflammation, is of the highest importance. Third, the treatment ought to be resolvent and evacuating, also subsequently stimulating the intestinal function, always having regard to the imminent danger from inflammation. Fourth, injections are important prophylactics against, and remedies for, the temporary paralysis of the cœcum, since they reach the diseased part in a quick and safe manner, and without any danger to the organism. In general, Prof. Clar warmly recommends injections in diseases of children, in order to produce effects as well on the diseased intestines, as on the intestinal contents, and on other suffering parts of the organism.

7. *Perforation of the vermiform process.*—A. Mertens, (*Journ. für Kind.*, 1858, March and April, p. 161), publishes four cases of this disease, all of them resulting in the death of the patients. They occurred in males of 9, 18, 4, and 5 years of age. The cœcum took little or no part in the disease, just the reverse of what Copland reports to have occurred in his cases, (*Dict. of Pract. Med. Art. cæcum*). The majority of cases reported in the medical journals occur in young persons. The usual result of foreign bodies lodging in the vermiform process, is death, in consequence of a very dangerous reaction following, which fact proves by itself, that the process has a function of its own. The author is inclined to attribute to it a function analogous to that of the pancreas; it is said to complete the cœcal digestion in a similar manner, as the pancreas completes the duodenal one. He believes that he has found, on the cœcal part, bundles of circular fibres, constituting as it were an orbicular muscle. A case of perforation of the vermiform process, produced by impacted fæces, is reported also by Prof. Clar. (*Jahrbuch für Kinderheilkunde und Erziehung*, 1857, ii., p. 86). The patient was a boy of five years of age.

8. *Proposed modification of the operation for imperforate anus* (*Edinb. Med. Jour.*, March, 1858, p. 807).—Dr. Hermann Friedberg (*Chirurgische Klinik*, 1855, i. p. 165–224) recommends the method of Amussat, viz.: bringing down the gut when an opening has been made in it, and stitching it to the outlet in the perineum. The advantages are that there is a mucous membrane lining the whole tract of the canal; that the evacuations are more easily accomplished; that the natural tendencies in canals, not so provided, to gradually contract, is prevented; that the irritation and danger arising from the contact of effete matter with tissues not intended for such contact is also obviated. Redfern Davies thinks success more probable by often repeated, almost imperceptible, tractions upon the gut, than by trying to bring it down at once. Such is the modification he recommends. The idea has been taken from a case operated upon in a similar way and successfully, which has been described in the *Lancet*, 1846.

9. *Ascites Congenitus* (*Monatsschrift für Geburtskunde und Frauenkrankheiten*, 1858, xi. 3, p. 161).—R. Virchow reports the case of an infant, born with ascites and hereditary peritonitis. The mother, about 30 years of age, had six children, the first of whom is about 12 years old, and healthy; but the last three died pretty soon after birth, and had, each of them, the abdomen swelled by dropsical accumulation.

10. *Swallowing needles.*—Dr. Edgren (*Jour. für Kind.*, March and April, 1858, p. 168) reports two cases of children swallowing needles without unfortunate consequences. A boy, 3 years old, swallowed a needle 2½ or 3 inches in length, which a month later penetrated the skin, near the sternum, from beneath the pectoral muscle. A boy of 4 years of age, swallowed a large pin with a big head, the head going down first. On the third day after there was pain in the right side, about the region of the pylorus and duodenum. On the eighth day the head was removed from the anus, only an inch of the pin being in connection with it.

II.—UROPOIETIC AND SEXUAL ORGANS.

1. *Stones in the bladder in Hungary* (*Allgemeine Wiener Medicinische Zeitung*, 1858, No. 13).—Of 135 cases of stone in the bladder, treated by Prof. Balassa, of Pesth, twenty-one occurred in persons under 7 years; thirty-two from 8 to 15 years. Besides, forty-nine children have been treated for the same disease in the children's hospital of Pesth, during the years 1843–1855. Children in early life and with coarse diet are most subject to stone; this fact Prof. Balassa explains by inadequate food, children, after having been weaned, being nourished with herbs, potatoes, etc., which contains a large quantity of carbon. Thus, carbon forms the principal part of urinary calculi in Hungary. The majority of Balassa's consisted of oxalic salts. Of twenty stones having a nucleus differing from the mass, the nucleus was of oxalates in twelve, of uric matter in eight, wherefrom the conclusion may be drawn, that oxalates and urates give the impulse to the formation of stone, posphates only increasing its bulk. The sound produced by the probe is of some diagnostic importance; the sound being sharper with oxalic

stones, which are harder; duller with phosphoric stones, which are less hard and dense.

2. *A cystiform expansion of the right ovarium, by extravasated blood* in a stillborn child of seven months was reported by B. Schultze (*Monatsschrift für Geburtskunde und Frauenkrankheiten*, 1858, xi. 3. p. 170). The tissue of the ovary was torn and broken, in some parts scarcely perceptible, by blood both fluid and coagulated, and fibrous coagulations.

III.—ACUTE EXANTHEMS.

1. *Acute exanthems combined with traumatic injuries.*—It is but natural that acute exanthems, when following, or combined with acute inflammatory, and febrile diseases, should be of a highly dangerous character. But merely local inflammations also, which have been produced by local influences, apparently of no importance, seem to give a bad prognosis, when followed by an acute exanthem. Some cases, which elucidate this assertion, have been published by Dr. Paasch, (*Journ. für Kind.*, March and April, 1858, p. 203).

2. *Variola in newborn infants* (*Zeitschrift der Gesellschaft der Aerzte zu Wien*, 1857, No. 13).—A female child (premature) was born, on the 25th of Febr. 1857, with variola vera, forty-six pustules being found when the child died, thirty hours after birth. The mother was a healthy primipara, 28 years of age. While in the hospital, she was for a short time in a room with patients affected with variola; two pustules of variola made their appearance on her, while she was under the endemic influence. Eight days after her being wholly recovered she was sent to the lying-in hospital where she was confined. She remained in good health afterwards.

A case similar to this, which is reported by Dr. Wallman, has been under the observation of Prof. Hebra. The mother was confined while suffering from variola. The child affected with pustules of variola in different stages of development, was stillborn.

[Variola in newborn children being a very rare occurrence, we communicate to the profession the following case, which Dr. Michaelis, of Attorney st., kindly allowed us to publish. We have to add that this is the only case which Dr. Michaelis, who is engaged in a very extensive obstetrical practice in this city, ever saw. We take the following particulars from a letter of Dr. Michaelis: "Mrs. H . . ., of 104 Attorney st., primipara, gave birth on the 12th of May, to a male child, who lived only a few moments and was covered with variola, most extensively so on his face and thorax. There was nothing abnormal about the confinement, except an uncommon painfulness of the back. The pustules of variola appeared to be in the sixth or seventh day of their development. The mother was not, nor had she been during her pregnancy, suffering from variola or varioloid, or, as far as could be learned, from varicella, but there is one interesting characteristic fact in the history of her pregnancy. When in her fourth month, she was present at the death of a child, who died from variola. For full four weeks she felt exceedingly sick, suffering from repeated chills, and was continually afterwards afraid of having variola. Her pregnancy took a favorable course. A. J.]

3. *New instrument for vaccination (London Lancet,* Am. ed., 1858, p. 459).—This is the invention of Mr. Borham, London, and is a small instrument, convex above and concave below, so as to adapt itself to the configuration of the child's arm, where, by pressing it, a ridge of skin is formed, into which the lancets can be made to penetrate by means of a cogwheel. There are sets of lancets which are grooved at the points, so as to retain the virus more completely.

4. *Coincidence of variola and vaccina* (M. E. GINTRAC in *Journal de Médecine de Bordeaux,* March, 1858; *Gaz. Hebdom. de Méd. et de Chir.,* 1858, No. 15).—The facts, as elucidated by a large number of citations are the following: Where variola sprung up, after vaccina had begun its course, vaccine has been either completely kept back or interrupted even as long as the course of variola lasted, or has taken a slower development. Thus there is a decided influence of variola on the invasion and development of vaccina; there is also an influence on the form of the pustules, which may undergo great modifications, viz.: 1. A diminution, or even a complete absence of the variola; 2. A diminution or absence of the subjacent induration and tumefaction; 3. An imperfect development of the pustules as to color, and size; 4. In some cases a suppuration analogous to the one in discrete variola. Notwithstanding such modifications, the fluid contained in the pustules was apt to transmit the contagion. Vaccine, too, may modify variola, the more so the nearer it is to its regular termination. 1. Inoculation of variola, performed after the ninth or eleventh day of vaccination, is not successful. If performed on the fourth, fifth, or seventh day, it sometimes produces pustules, which do not contain, however, fluid matter, and are prone to desiccate on the seventh or even fifth day. 2. James Boyce observed, that the pustules of variola, inoculated after vaccination, are very much like vaccine pustules. 3. Variola occurring after vaccination always took a mild course, even when in the neighborhood or the same house, there was confluent variola. 4. Cases of variola have been observed to begin with a high fever and dangerous general symptoms, which diminished as soon as vaccine began its course. 5. Variola after vaccination has no secondary fever, no swelling of the face, no ptyalism. 6. Its duration has been brought down to eight, six, five, even four, days.

5. *Prophylactic treatment of scarlatina (Gaz. Hebd. de Méd. et de Chir.,* 1858, No. 18).—Raoul Leroy (d'Etiolles) asserts the efficiency of belladonna as a prophylactic against scarlatina; being convinced by his experience and experiments that wherever it is unable to keep the disease entirely out of the way, it at all events, renders each individual case milder and safer. Leroy puts no confidence whatever in some remedies recommended for the same purpose formerly; as, for instance, sulphurous or nitrous fumigations, lemonades of mineral acids, purgatives, calomel, sulph. aur., etc. As to *inoculation,* he feels satisfied that it is not deserving of any confidence, nor the recommendations of Miguel, Noirot, Petit-Radel, and Home.

6. *Recidive measles.*—Drs. von Düben, Malmsten, Böttiger, and Levin, of Stockholm (*Journ. für Kind.*, 1858, March and April, p. 172) report about ten cases of measles occurring twice in the same children, the intervals between the first and second times being from four or five days to some months. Dr. Malmsten saw measles in a man who was positive about having suffered from the same exanthem twice before.* The same writer reports to have inoculated measles in his two sons, the exanthem making its appearance on the fourth day after the inoculation being performed.

7. *Relation between scarlatina and morbilli.*—Dr. R. Küttner, of Dresden (*Journ. für Kind.*, 1858, March and April, p. 180), does not consider both of these exanthematic diseases to be so different from each other as Schoenlein thought they were, when he counted morbilli amongst the catarrhal, and scarlatina amongst the erysipelatous families of diseases. He at first points out such cases, which show the exact symptoms of neither scarlatina nor morbilli, and are often described under the denomination of rubeola (see *N. Y. Journ. of Med.*, May, 1858, p. 420). Then he refers to some facts laid down in medical literature, the number of which he augments by a singular case observed by himself, proving that the same contagion produces either scarlatina or morbilli in different individuals. How this could be done he does not venture to say; but it does not seem to be impossible for the organism to alter a contagium penetrating the whole system. A severe cold, for instance, produces rheumatism in one, catarrh in another individual.

IV.—CIRCULATORY ORGANS.

Sanguineous cavernous tumor above the root of the nose in a new-born infant (Zeitschrift der Gesellschaft der Aerzte zu Wien, 1858, No. 14).—Drs. Valenta and Wallmann report a case of erectile tumor, angioma, which rose from the pia mater, and being enveloped by the dura mater, penetrated through a fissure between the frontal, ethmoid, and nasal bones. An erectile tumor of the pia mater, on the surface of the left hemisphere, has been described by Rokitansky (*Handbuch der Pathologischen Anatomie*, ii, p. 735); but in general such cases are very rare. Cases of encephalocele on the same place where our erectile tumor was found, have sometimes been reported. Wallmann relates a case of hydromeningocele in the same locality, which he found in an idiotic female of fifty years of age.

V.—RESPIRATORY ORGANS.

1. *Tumor in the trachea (London Lancet*, Am. ed., 1858, p. 363).—In the Harveian Society, Dr. Fuller referred to a case, in which there was a large scrofulous tumor in the trachea, accompanied with a croupal sound during expiration, in contradistinction to the inspiratory sibillation of genuine croup.

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* The reviewer remembers well the case of a child, about two-and-a-half years old, whom he saw suffering from measles two different times in the course of a year. Moreover, he was told, that some months before he first saw the child it suffered from a like attack.

2. *New instrument for performing tracheotomy (Gaz. Hebdom. de Méd. et de Chir.*, 1858, No. 17*)*.—Mathieu exhibited before the Paris Academy of Medicine, on the 22d of April, a new instrument, which was very much like a *lithotome caché*, by which he claims to perform the incision of the trachea in a safer and quicker manner than by any one else. We shall give a more extensive report after it has been sufficiently tested and proved satisfactory.

3. *Croup.*—Dr. Hauner (*Journ. für Kind.*, 1858, March and April, p. 209), one of the best, perhaps the best, clinical teacher of diseases of children, when refuting some theses published by Dr. Luszinsky (see *N. Y. Jour. of Med.*, March, 1858, p. 282), gives the following aphorisms, embracing the contents of a work soon to appear: 1. Genuine (laryngeal) croup is a disease peculiar to infantile age; its cause is to be looked for in the organization (stage of development) of the infantile larynx. 2. Anatomy and physiology will probably elucidate its nature. 3. There is no proof that croup is produced by a peculiar crasis (abnormal elasticity) of the blood. 4. Genuine croup always commences in the larynx, and many times migrates downwards, but in no case upwards. 5. A Pseudo-membrane, large or small, is a characteristic of croup. 6.. Diphtheritic croup differs much from laryngeal croup, and usually is the consequence of, or connected with, a peculiar crasis of the blood, which is known also in other organs. 7. Thus diphtheritic croup is almost always secondary, and is essentially not very much different from croup following acute exanthems. 8. Diphtheritic croup usually commences in the fauces, on the uvula, tonsils, etc., migrating downwards; very seldom it commences in the larynx and trachea. 9. The symptoms of a violent laryngeal catarrh are very similar to those of genuine or diphtheritic croup; but there is never a false membrane in catarrh. 10. Such cases are very often considered to be, and are described as, croup. 11. There is no specific remedy against genuine croup; therapeutics have to undergo modifications according to the individual case. 12. In the average of cases, emetics, cold, mercury, bloodletting, will do good. 13. In certain cases of laryngeal and tracheal croup, the operation is indicated. 14. Diphtheritic croup requires cauterization, emetica, alkalies, tonics—in no case calomel, bloodletting, vesicatories, or purgatives. 15. In diphtheritic croup, tracheotomy is seldom indicated, particularly because of the rapid spreading of the diphtheritic process. 16. If it has been made, cauterization has to follow it. 17. The most violent laryngeal catarrh does well with an appropriate regimen and anti phlogistic treatment. The proof of this is the great number of so-called cases of croup which are reported to be cured.

4. *Croup and pseudo-croup.*—Dr. Kerli (*Deutsche Klinik*, 1858, No 5–7) states the same difference between the genuine croup and laryngeal catarrh (pseudo-croup), which has the cough of croup without any false membrane. Sometimes the "spasmodic pseudo-croup" (Millar's asthma) also shows the symptoms of croup, and has been sometimes observed to precede genuine croup for some days.

5. *Cold water and sulphate of copper in croup.*—Dr. Pudon (*Journ. für*

Kind., 1858, Jan. and Feb., p. 1) publishes some cases of croup where the local application of cold water, made after Priessnitz, and emetics of sulphate of copper, were sufficient to cure even severe and obstinate attacks.

6. *Tartar emetic in croup.*—Dr. A. Kortüm (*Deutsche Klinik*, 1858, No. 20) considers tartar emetic as the very best remedy in croup, but gives it in another way than it is usually prescribed. He prescribes for a child of one year of age, from $\frac{1}{16}$ to $\frac{1}{8}$ grain every two hours ; for older ones, comparatively larger doses, thinking the alterative effect on the blood most important, and nothing less desirable than the mere emetic effect in the shortest time possible. The author seems to be almost positive about the favorable result, but considers new attacks imminent, as long as the purgative effect of the medicament has not also showed itself.

7. *Local applications in croup.*—E. H. Mayer (*Am. Jour. of the Med. Sc.*, April, 1858, p. 338) feels bound to recommend glycerine as a local application to the rima glottidis, from whence it is expected to glide down into the larynx. John D. Shetton (*Am. Jour. of the Med. Sc.*, April, 1858, p. 340), reports to have applied, in a few severe cases, with a favorable and even unexpected result, an ointment of extr. bellad. and ungt. hydr., either to the sound skin over the trachea, or to a blistered surface.

8. *Fatal enlargement of the thymus gland with subjacent tumors.* (Dr. Hartshorne in Trans. of the Coll. of Phys. of Philadelphia, *Am. Jour. of the Med. Sc.*, April, 1858, p. 378.)—The child was five months old ; it had always appeared to be healthy and well developed, and presented no symptoms of disease to attract attention up to the moment of death. It was suckled by its mother at two o'clock of the morning of its decease, when it went to sleep as usual. At about seven A.M. it was found dead, lying on its back, with blood about the nostrils, and the jugular veins distended. Examination of the body displayed no peculiarity, except the morbid alteration of the gland, and the results of its pressure upon other parts. The heart was forced down close upon the diaphragm. The vena cava descendens contained an unusual quantity of blood. The thymus was very much enlarged, and below the proper gland, but connected with it, and inclosed in a continuous enveloping membrane, was a mass whose appearance and consistence resembled those of fatty structure, and which, when shrunk under the influence of alcohol, had 3 inches in perpendicular length, 2 inches in width transversely, and $\frac{7}{8}$ of an inch in antero-posterior thickness.

VI.—NERVOUS SYSTEM.

A monster of the genus peracephalus (*Am. Jour. of the Med. Sc.*, April, 1858, p. 70.)—Dr. Walter F. Atlee gives the following account: "The monster has no head or upper extremities. The trunk and lower extremities are of a size corresponding to those of a well formed fœtus of seven months. A want of perfect symmetry, however, is very manifest in the two halves of the trunk, which is remarkable for a number of elevations, with depressions between them. These elevations are due to the accumulation of a great quantity of cellular tissue. This sort of lumpy condition exists likewise in the lower limbs, which present, in addition, several other imperfections. The feet are turned inwards, and they possess but four toes, two of which, the smallest, on one foot, are not separated. The external organs of generation are those of the female; the anus exists. Upon the front of the trunk, between the umbilicus and its upper extremity, is something having the appearance of a small empty bag or bladder, attached by a rather narrow pedicle. Both above and below this bag is a small tuft of hair. Towards the sides of the thorax, in the place usually occupied by the nipples, are small round orifices."

VII.—MOTORY ORGANS.

Congenital luxation of the patella.—A case of congenital luxation of the patella upwards, caused by the abnormal length of the ligg. patellæ propria, has been observed by Dr. Ravoth, of Berlin (*Monatsschrift für Geburtshülfe und Frauenkrankheiten*, 1858, No. 5, p. 340). Two other cases have been published in *Deutsche Klinik*, 1858, No. 4, by Ravoth, and in No. 48 and 49 by Eulenburg.

VIII.—DYSCRASIC AND TOXÆMIC DISEASES.

1. *Two cases of diphtherite* (*London Lancet*, Am. ed., 1858, p. 423).—Bernard M. Browne reports two deaths by diphtheritic dissolution of the blood, on which cases he looks as a new disease, though allied in some of its character to malignant "scarlet fever." [Rapid deaths by diptheritis seem to be very rare occurrences in Great Britain, which is an interesting fact as to nosogeography. Thus, after all, an English physician may be excused for never having seen the disease in question, but not for the total want of knowledge of its existence. For there is scarcely a manual on the diseases of children on the continents of Europe and America, and in England too, that would not state the fact, that some cases of diphtheritis faucium have such an asthenic, adynamic type, and go along with such a general depression of every vital function as to cause death in a short time, without apnœa or any visible material change in the organic structure of the body, except the diphtheritic exudation on the fauces. Such cases are to be considered as proofs of a rapid dissolution of the blood, similar in its effect to the typhous one. The same want of knowledge of their own and foreign literature has been shown by the Medical Society of London, where Dr. Camps read a paper on the same subject (*London Lancet*, Am. ed., 1858, p. 433). See also the Manuals of Rilliet and Barthez, Bouchut, Bednar, Hennig, Schnitzer and Wolf, Coley, West, Churchill, Evanson and Maunsell, even Underwood, Condie, Meigs, etc. Hamilton's paper in *Ed. Med. J.*, vol. ii., p. 235. Bretonneau, *Des inflammations spéciales du tissu muqueux, et en particulier de la diphthérite.* Verson, *der Arzt am Krankenbette der Kinder*, etc. A. J.]

2. *Intermittens larvata bihebdomadaria.*—Dr. Gabriel reports (*Jour. für Kind.*, Jan. and Feb., 1858, p. 131) the case of a boy of fourteen years of age, who had been suffering, for the last two and a half years,

from headache and vomiting, every fourteenth day, which was always Tuesday; the boy being entirely well the other thirteen days. He soon recovered after taking chin. and ac. arsenicos.

3. *Hydrophobia.*—A case of hydrophobia, observed by Prof. Santesson, of Stockholm (*Journ. für Kind.*, March and April, 1858, p. 173), occurred in a girl eight and a half years old. The disease showed itself on the forty-fifth day after the child had been bitten, and resulted in death after two days' intense suffering. Post-mortem examination eighteen hours later: Considerable rigor in the maxillar joints, the joints of the lower and particularly the upper extremities being somewhat more flexible. When the external integuments were being incised, there was a smell of chloroform, which the child had inhaled before death. The inner side of the galea, corresponding with the spot where the child was bitten, had its blood-vessels pretty much injected with blood; also the cranium was, in the corresponding part, somewhat exfoliated. The cerebral membranes were normal, the venous vessels of the arachnoide, particularly on the basis, abnormally filled with blood. The cerebral substance was normal, a little hyperæmic; the lateral ventricles contained some clear serum; the choroid plexus of the right lateral ventricle was somewhat extended by serum. When the thorax was being opened, the lungs did not collapse; after an incision was made, a large quantity of a dark fluid blood effused; the right lung adhered to the thoracical pleura by old adhesions; its middle lobe was almost entirely collapsed; the bronchia, in this part, were dilated and filled up with a purulent liquid. On the outside of one of them was a calcareous concrement of the size of one half of a pea. The mucous membrane of the larynx was pale, of the trachea red, and everywhere below the bifurcation, in all the bronchia, highly ingested. The left lung showed interlobular emphysema. The heart was normal and contained liquid blood and fibriuous coagulations. The mucous membrane of the fauces was not particularly injected; the tonsils were swollen; when incised, a purulent fluid escaped. The superior surface of the tongue was pale and covered over with some mucus; the inferior surface showed no blisters of any kind or size. There were some erosions on the mucous membrane of the stomach, particularly near the pylorus. The intestines and spleen were normal, liver and kidneys normal, but hyperæmic.

Minutes of the Eleventh Annual Meeting of the American Medical Association, held in the City of Washington, May 4, 1858; condensed from the official report in the Med. and Surg. Reporter.

THE Association met at 9 o'clock, A.M., in the lecture-room of the Smithsonian Institution, the President, Dr. Paul F. Eve, of Tennessee, in the chair, supported on either side by Drs. D. Meredith Reese, of New York, and H. Frazer Campbell of Georgia, Vice-Presidents; and Drs. Robert C. Foster, of Tennessee, and A. J. Semmes, of Washington City, Secretaries.

The President announced Rev. Dr. Sunderland, of Washington City, who opened the proceedings with prayer.

The President having announced that reports were in order, Dr. Harvey Lindsley, Chairman of the Committee of Arrangements, on behalf of the Medical Profession of the District of Columbia, in a few appropriate remarks, extended a sincere and cordial welcome to the members of the Association.

On motion, the list of delegates, so far as it could be made, was then read by the Secretary, and twenty-five States, the District of Columbia, the Medical Staff of the U. S. Navy, and the American Medical Society in Paris, were represented. [During this session of the Association, more than 450 delegates were present].

Dr. Harvey Lindsley, Chairman of the Committee of Arrangements, reported that the session would be held from 9 A.M. to 3 P.M.; also that the President of the United States would be happy to receive the members of the Association, and their ladies, at the Executive Mansion, in the evening, at 8 o'clock.

Dr. H. Lindsley moved, that in order to furnish each State delegation an opportunity to choose a member to represent them on the Nominating Committee, a recess of fifteen minutes be taken, which was agreed to; and, at the conclusion of which, the following gentlemen were reported for the Committee:

Nominating Committee.—Job Holmes, Maine; Geo. H. Hubbard, New Hampshire; P. Pineo, Vermont; Ebenezer Alden, Massachusetts; Ashbel Woodward, Connecticut; J. Mauran, Rhode Island; H. D. Bulkley, New York; I. P. Coleman, New Jersey; Isaac Hays, Pennsylvania; H. F. Askew, Delaware; S. P. Smith, Maryland; Noble Young, District of Columbia; A. S. Payne, Virginia; W. H. McKee, North Carolina; W. T. Wrag, South Carolina; Jos. P. Logan, Georgia; J. T. Hargraves, Alabama; R. J. Breckenridge, Kentucky; J. Berrien Lindsley, Tennessee; W. M. McPheeters, Missouri; George Mendenhall, Ohio; Calvin West, Indiana; A. H. Luce, Illinois; Zina Pitcher, Michigan; Tom O. Edwards, Iowa; O. Harvey, California; George Clymer, U. S. Navy.

Dr. Pitcher, of Michigan, moved that the U. S. Army and Navy be entitled to representation on the Nominating Committee. After some discussion by Drs. Miller, of New York, and Condie, of Pennsylvania, the Chair decided in favor of the representation. This decision was appealed from, but a vote being taken, the Chair was sustained.

On motion, a Committee on Voluntary Essays was then appointed, consisting of Drs. Rohrer, of District of Columbia, Flint, of New York, and Hargraves, of Alabama.

The Chair announced that Dr. D. Meredith Reese, of New York, one of the Vice-Presidents of the Association, desired permission to make a communication; which having been granted, Dr. Reese read the following statement:

To the Officers and Members of the American Medical Association:

The undersigned, one of the Vice-Presidents of the American Medical Association, having, during the interval since our last meeting, certified to the professional fitness for the charge of the Blockley Hospital at Philadelphia, of an individual who had been expelled from this body for a violation of our Code of Ethics, after consultation with the other officers, and yielding to the advice of other personal friends, desires to say to the Association now assembled—

1. That in giving said certificate he was prompted solely by motives of sympathy and humanity to a fallen brother, who had been a personal friend prior to his offence; and that he did not realize, acting under the impulse of the moment, that his individual act could be construed by the profession as indicating hostility to his brethren.

2. That while his own mind is clear that his certificate contained only the truth, and that, under his peculiar relations to the party concerned, he could not withhold his certificate of medical qualification, consistent with conscience and duty, yet he is ready to concede that he had no abstract right to relieve the party from the censure of the Association until this body had restored him to its fellowship.

3. That so far from intending any disrespect to the Association, or to its act of discipline, the undersigned had publicly sustained and defended both. He therefore disclaims the inference from his certificate that he intended to recommend to a high professional office a man whom the Association had excluded, and thereby nullify the action of this body.

And finally, with these statements and disclaimers, the undersigned, while retaining his own opinion of the rectitude of his motives, and of his duty, under the peculiar circumstances of the case, is nevertheless prepared to defer to the judgment of those whom he knows to be his friends, that he erred in doing what he had no right to do, in view of his official position in the Association, and is hence called upon to offer this explanation and apology to his brethren.

D. M. Reese.

Dr. Condie, of Pa., moved that the apology be received. A substitute was offered, by way of amendment to this motion, declaring that the Code of Ethics of the Association had been violated. The amendment was not agreed to, and the original motion of Dr. Condie was adopted.

On motion of Dr. Atlee, of Pa., the statement of Dr. Reese was ordered to be entered upon the minutes.

Dr. James Bryan, of Pa., said that he was in the same position with Dr. Reese, and offered a similar statement; which was, on motion of Dr. Condie, of Pa., received.

On motion of Dr. Lindsley, of D. C., Dr. Paul F. Eve, of Tenn., the retiring President, delivered the Annual Address.

On motion of Dr. Atlee, of Pa., the President was requested to furnish a copy of his address for publication in the *Transactions* of the Association.

Reports from standing committees being in order, Dr. Grafton Tyler, of D. C., Chairman of the Committee on Prize Essays, submitted the following report:

The Committee on Prize Essays report that the essays received were three in number, each of which has been examined by them with great care, considering first the intrinsic merits of each essay, and then their merits in relation to each other.

The Committee have discharged the responsible and delicate duty imposed upon them, with a consciousness of its great importance, and are gratified to be able to declare two of the essays submitted to their consideration, in their judgment, each worthy of a prize. The third they also highly commend.

The Committee award the first prize to the essay entitled "*An Essay on the Clinical Study of the Heart-Sounds in Health and Disease.*" It bears the motto, "*Clinica, clinice demonstrandum.*"

They award the second prize to the essay entitled "*An Essay on Vision, and some of its Anomalies, as revealed by the Ophthalmoscope.*" It bears the motto, "*Dux Hominum, medicus est.*"

Grafton Tyler,
J. C. Hall,
Jno. Fred. May,
Thomas Miller,
Joshua Riley,
W. J. C. Duhamel,
A. J. Semmes.
} *Committee on Prize Essays.*

On motion the report was accepted, and the essays were referred to the Committee on Publication. Dr. G. Tyler, then, in the presence of the Association, opened the sealed packets, disclosing the names of the authors, and found the "*Essay on the Clinical Study of the Heart-Sounds in Health and Disease,*" to which was awarded the first prize, to have been written by Dr. Austin Flint, of Buffalo, N. Y., and the "*Essay on Vision, and some of its Anomalies, as revealed by the Ophthalmoscope,*" to which was awarded the second prize, to have been written by Dr. Montrose A. Pallen, of St. Louis, Mo.

Dr. Caspar Wistar, of Pa., the Treasurer, presented his annual report, with the accompanying resolutions:

Resolved, That on or after any annual meeting of this Association, each of the back numbers of *Transactions* shall be sold at $2 apiece to permanent members, except that published during the year next preceding, this to continue at the price paid for it by delegates till the next annual meeting; and also,

Resolved, That as certain volumes are in great excess, the four vols., v., vii., viii., ix., shall be sold collectively to any permanent member who shall remit $5 to the Treasurer.

The Committee on Nominations, through their Chairman, Dr. Thos. O. Edwards, of Iowa, reported in part, as follows, which report was, on motion, unanimously adopted:—

President.—Harvey Lindsley, Dist. of Columbia.

Vice-Presidents.—W. L. Sutton, Ky., Josiah Crosby, N. H., Thos. O. Edwards, Iowa, W. C. Warren, N. C.

Secretary.—Alex. J. Semmes, Dist. of Columbia.

Treasurer.—Caspar Wistar, Pa.

Wednesday, *May 5th,* 1858.

The Association met at 9 o'clock, A.M., pursuant to adjournment, the President, Dr. H. Lindsley, in the chair.

Dr. Thos. P. Atkinson, of Va., submitted the following:—

Resolved, that the Constitution of this Association be so amended as to provide that no individual who shall be under sentence of expulsion or suspension from any State or Local Medical Society, of which he may have been a member, shall be received as a delegate to this body, or be allowed any of the privileges of a member, until he shall have been relieved from said sentence by such State or Local Society.

The President decided that under the Constitution, amendments to it must lie over one year, and the resolution was accordingly laid on the table, for consideration at the next annual meeting.

Dr. Jas. R. Wood of N. Y., Chairman of the Special Committee on Medical Education, submitted his report, which was read, with the following resolutions :

Resolved, That the several Medical Colleges of the United States be requested to send delegates to a convention, to be held at on the day of for the purpose of devising a uniform system of medical education.

Resolved, That the present Report of the Special Committee on Medical Education be referred to such convention for its consideration.

Resolved, That said convention of delegates from the several colleges of the United States be requested to submit to the meeting of this Association, in May, 1859, the result of their deliberations.

On motion, the report was accepted and referred to the Committee on Publication ; and the accompanying resolutions were laid on the table.

Dr. Thomas O. Edwards, of Iowa, submitted the following partial report :

The chairman of the Committee on Nominations begs leave to report that the committee recommend Louisville, Kentucky, as the next place of meeting of the Association.

Secretary.—S. M. Bemiss, of Kentucky.

Standing Committees.—*Committee on Publication.*—Francis G. Smith, of Philadelphia, Chairman ; Caspar Wistar, of Philadelphia, A. J. Semmes, of Washington, D. C. ; S. M. Bemiss, of Louisville, Ky. ; Samuel L. Holingsworth, of Phila. ; Samuel Lewis, of Phila., and H. F. Askew, of Delaware.

Committee on Medical Literature.—John Watson, of N. Y., Chairman ; Lyndon A. Smith, of N. J. ; C. G. Comegys, Ohio ; R. W. Gibbs, S. C. ; W. M. McPheeters, Missouri.

Committee on Prize Essays.—J. B. Flint, Louisville, Ky., Chairman ; M. Goldsmith, ; Henry H. Miller, Louisville, Ky. ; Ashbury Evans, Covington, Ky. ; Calvin West, Ind.

Committee of Arrangements.—R. J. Breckinridge, Louisville Ky., Chairman ; G. W. Ronald, B. M. Wible, D. W. Yandall, D. D. Thomson, N. B. Marshall, G. W. Buyluss, R. C. Hewitt, A. B. Cook.

Committee on Medical Education.—Geo. W. Norris, Phila., Chairman ; A. H. Luce, Illinois ; E. R. Henderson, S. C. ; G. R. Grant, Tenn. ; T. S. Powell, Geo.

The report of the committee was accepted, the nominations were confirmed, and the committee were granted permission to sit again.

On motion of Dr. Comegys, of Ohio, the resolutions submitted by the Special Committee on Medical Education were taken from the table for consideration.

A long discussion ensued, upon the motion of Dr. Hamilton, of N. Y., to refer the resolutions to a committee, consisting of one member from each delegation, representing a medical college, these members to be named by the college delegates present, and to report on Thursday morning, at ten o'clock. The debate on the motion was terminated by the operation of the previous question, which was moved by Dr. Foster, of Tenn., and the motion of Dr. Hamilton was agreed to.

Dr. John F. Lamb, of Penn., moved that the vote by which the motion of Dr. D. Francis Condie, of Penn., accepting the apology of Dr. D. Meredith Reese, of N. Y., was carried, be reconsidered.

The President decided that a reconsideration was not in order without a suspension of the rules.

A motion to suspend the rules was made, and a division being called, there were found 111 votes in favor of the motion, and 82 against it. The Chair declared that the rules were not suspended, two-thirds not having voted in the affirmative.

An appeal was taken from the decision, and the decision of this Chair was reversed; and the motion of Dr. Lamb to reconsider was agreed to by a vote, on a division, of yeas 142, nays 70.

On motion, the case of Dr. Bryan, of Penn., was laid on the table. Dr. Beck, of Indiana, moved an indefinite postponement of the whole subject. The Chair decided that debate on the motion was not in order.

Dr. Jewell, of Pa., rose to a point of order, when the Chair reversed its decision.

Dr. Jewell then proposed to read the memorial upon the subject from the Philadelphia County Medical Society, when Dr. Biddle, of Pa., objected to it as out of order.

The President decided that the point was not well taken, from which decision Dr. Biddle appealed.

The appeal was not submitted; and upon motion, the Association went into Committee of the Whole for the consideration of the whole subject of the apology of Dr. Reese; and Dr. Thomas O. Edwards, of Iowa, was called to the chair.

After some time had been spent therein, the Committee of the Whole rose, and, through their chairman, reported to the Association that the Committee had had the apology of Dr. D. Meredith Reese, of N. Y., which had been referred to them, under consideration, and had arrived at the following conclusion thereon: that it was considered "ample, full, complete, and satisfactory."

On motion, this report was received and adopted. Dr. Lamb moved that the apology of Dr. Reese be amended by the insertion of the word "regret." After some debate upon this motion, Dr. Reese submitted the following statement:

> The undersigned regrets that he certified to the professional qualifications for Blockley Hospital, Philadelphia, of an expelled member of this body, and hereby offers his apology for his departure from the ethical code.
>
> (Signed), D. M. Reese.

On motion, this apology was accepted as satisfactory. Dr. Bryan, of Penn., then offered the same as the language of his apology, which was accepted by the Association upon a motion to that effect.

On motion, the Association adjourned.

Thursday, *May* 6, 1858.

The President called the Association to order at nine o'clock.

The following resolution, offered by Dr. R. C. Foster, of Tenn., was adopted:

Resolved, That all reports from Committees on Epidemics and Medical Topography be referred to the Committee on Publication, and all communications from Special Committees be referred to the Committee on Nominations.

Dr. Frank H. Hamilton, of N. Y., from the Committee of Delegates from Medical Colleges, to whom were referred the resolutions reported by the Special Committee on Medical Education, submitted the following report:

The Committee to whom was referred the resolutions appended to the report of the Special Committee on Medical Education, have adopted the following preamble and resolution: Fully appreciating the value and importance of the resolution under which we have been appointed, but a majority of the gentlemen constituting this Committee not being authorized by the medical faculties of the several colleges with which we are connected to act as their representatives in this matter; and moreover regarding it as quite impossible to secure a convention of delegates in the interim of the meetings of this Association—

Resolved, That we recommend to all the medical colleges entitled to a representation in this body, that they appoint delegates especially instructed to represent them in a meeting to be held at Louisville, on Monday, the day immediately preceding the convention of the American Medical Association for the year 1859, at ten o'clock in the morning, at such place as the Committee of Arrangements shall designate.

S. D. Gross, *Chairman.*
Frank H. Hamilton, *Secretary.*

This report was accepted, on motion of Dr. Kemp, of Md., and the preamble and resolution were adopted, and the committee instructed to meet in Louisville on the Monday preceding the session of 1859.

Reports from special committees for 1858 being now in order, the reports of Committees on Medical Topography and Epidemics having previously been referred to the committee on Publication without reading, Dr. J. Foster Jenkins, of N. Y., Chairman of the Committee on "Spontaneous Umbilical Hemorrhage of the Newly Born," presented his report, which was accepted and referred to the Committee on Publication.

Dr. S. M. Bemiss, of Ky., Chairman of the Committee on Influence of Marriages of Consanguinity upon Offspring, read his report, which was accepted and referred to same committee.

Dr. Atlee, of Penn., from the Committee on the subject of preparing a stone for the Washington National Monument, reported that such had been done; that it was of Vermont marble, and was ornamented with a relief representing Hippocrates refusing the presents of Artaxerxes, with the inscription, "Vincit amor patriæ." The report, with the accompanying resolutions, was accepted and referred to the Committee on Publication.

Dr. E. Andrews, of Ill., Chairman of the Committee on Functions of Different Portions of the Cerebellum, offered, through Dr. A. B. Palmer, of Mich., an abstract of his report, which was read and referred to the same committee.

Dr. H. Fraser Campbell, of Geo., Chairman of the Committee on the Nervous concomitants in Febrile Diseases, read a report, which was accepted and referred to the same committee.

Dr. J. Marion Sims, of New York, Chairman of the Committee on Treatment of the Results of Obstructed Labor, read his report, which was accepted and referred to the same committee.

Dr. Mark Stephenson, of N. Y., Chairman of the Committee on the Treatment best adapted to each Variety of Cataract, with the Method of Operation, Place of Election, Time, Age, etc., read an abstract of his report, which was accepted and referred to the Committee on Publication.

Dr. C. B. Coventry, of N. Y., Chairman of the Committee on the Medical Jurisprudence of Insanity, and the Testimony of Skilled Witnesses in the Court of Justice, communicated his report, which was accepted and referred to the Committee on Publication.

Dr. Edwards, of Iowa, from the Committee on Nominations, presented the following report for Special Committees for 1859 :

Special Committee on the Microscope.—Drs. John G. F. Holstein, of Zanesville, Ohio ; John C. Dalton, Jr., of New York ; David Hutchinson, of Mooresville, Indiana ; A. R. Stout, of San Francisco, California ; Calvin Ellis, of Boston, Mass.

Special Committee on Medical Jurisprudence.—Drs. Stephen Smith, of New York city ; Frank H. Hamilton, of Buffalo, N. Y. ; Dixi Crosby, of Hanover, N. H. ; S. S. Purple, of New York city ; Isaac S. Mulford, of Camden, N. J.

Committee on Quarantine.—Drs. Elisha Harris, of New York ; J. M. Moriarty, of Boston, Mass. ; R. La Roche, of Philadelphia ; W. L. Wragg, of Charleston, S. C. ; E. D. Fenner, of New Orleans, La.

Committee on Surgical Pathology.—Dr. James R. Wood, of New York.

Diseases and Mortality of Boarding Schools.—Dr. C. P. Mattingly, of Kentucky.

On the Various Surgical operations for the Relief of Defective Vision.—Drs. Montrose A. Pallen, St. Louis, Mo. ; T. J. Cogley, Madison, Ind.

Milk Sickness.—Dr. Edward Murphy, New Harmony, Ind.

On the Blood Corpuscle.—Dr. A. Sager, Ann Arbor, Mich.

On Medical Ethics.—Drs. John Watson, New York ; John C. Dalton, Lowell, Mass. ; G. Emerson, Philadelphia, Pa. ; Frank H. Hamilton, Buffalo, N. Y. ; P. C. Gaillard, Charleston, S. C.

On the Pons Varolii, Medulla Oblongata, and Spinal Marrow, their Pathology and Therapeutics.—Dr. S. P. Richardson, Louisville, Ky.

On the American Necrology ; the Hygienic Relations of Air, Food, and Water, the Natural and Artificial Causes of their Impurity, and the best Method by which they can be made most effectually to contribute to the public health.—Dr. C. C. Cox, Easton, Md.

On the Effect of Virus of Rattlesnake, etc., when introduced into the System of the Mammalia.—Dr. A. S. Payne, Paris, Fauquier Co., Va.

On the Climate of the Pacific Coast, and its Modifying Influences upon Inflammatory Action and Disease generally.—Dr. A. Harvey, Placerville, Cal.

The Constitutional Origin of Local Diseases, and the Local Cause of Constitutional Diseases.—Dr. C. F. Heywood, New York.

Special Committee on Epilepsy.—Dr. John G. Kyle, Ohio, Chairman ; Drs. John G. F. Holston, Zanesville, Ohio ; D. Copper Ayres, Green Bay, Wisconsin ; H. J. Dunahoe, Sandusky, Ohio ; Calvin West, Ind.

Causes of the Impulse of the Heart, and the Agencies which Influence it in Health and Disease.—Dr. J. W. Corson, of New York city.

Best Substitutes for Chinchona and its Preparations in the Treatment of Intermittent Fever, etc.—Dr. B. S. Woodworth, of Fort Wayne, Ind.

Special Committee on Government Meteorological Reports.—Drs. Paul F. Eve, Tennessee ; Zina Pitcher, Michigan ; R. H. Coolidge, U. S. Army ; Thomas Miller, D. C.

To fill Vacancies in the Committee on Medical Topography and Epidemics ; and

Continuations of the Committees.—Maine, James C. Wilson, M.D., of Bangor; New Hampshire, Albert Smith, M.D., of Peterborough; Vermont, J. Perkins, M.D., of Castleton; North Carolina, James H. Dixon, M.D., of Wilmington; South Carolina, Peter C. Gaillard, M.D., of Charleston; California, Thomas M. Logan, M.D., of Sacramento; Michigan, J. H. Beech, M.D., of Cold Water; Connecticut, Charles Hooker, M.D., of New Haven.

Dr. Edwards also reported from the Committee of Nominations the following resolution:

Resolved, That a committee of nine be appointed by the Chair to wait on the Hon. Howell Cobb, Secretary of the Treasury, and respectfully to request the restoration of Dr. M. J. Bailey, as inspector of drugs and medicines for the port of New York.

This report was, on motion, accepted and adopted.

On motion of Dr. G. Tyler, of D. C., the vote by which the whole report was adopted was reconsidered, and the report was divided; and that portion of the report that referred to nominations for committees was adopted. Dr. Bolton, of Va., then moved the adoption of the resolution accompanying the report of the committee. Dr. C. C. Cox, of Md., offered the following resolution as a substitute:

Resolved, That the appointment of inspectors of drugs and medicines in the various ports of the United States should, in the opinion of this Association, have regard to the essential, moral, and scientific qualifications of the candidates, and not to considerations of personal favoritism or political bias.

Dr. Parker, of Va., offered two other resolutions as a substitute, which were not agreed to.

The question recurring on the adoption of the substitute offered by Dr. Cox, it was not agreed to.

Dr. Wilcox, of Connecticut, then moved an amendment to the resolution, by adding the words, "disclaiming all political considerations," which amendment Dr. Edwards accepted.

After some discussion, Dr. Rogers, of New York, moved to lay the resolution on the table.

The previous question was demanded and sustained.

The motion to lay on the table was lost, yeas 49, nays 64; and the resolution offered by Dr. Edwards, from the Committee on Nominations, was adopted with the amendment by a vote of yeas 79, nays, 52, and read as follows:

Resolved, That a committee of nine be appointed by the Chair to wait on Hon. Howell Cobb, Secretary of the Treasury, and respectfully to request the restoration of Dr. M. J. Bailey as inspector of drugs and medicines of the port of New York, at the same time disclaiming all political considerations.

Dr. Grant, of New Jersey, presented a complaint made by the Newark Medical Society against the New York Medical College, for a violation of the ethics of the profession. Dr. Edwards, of Iowa, presented a similar complaint, and Dr. Oakley, of New Jersey, a complaint from the Union and Essex County Medical Societies. They were received and referred to the Committee on Ethics.

Dr. W. L. Sutton offered the following:

Resolved, That a committee of three, to be composed of members belonging to the District of Columbia, be appointed, whose duty it shall be to urge upon the Census Bureau the great interest which this Association feels in a properly conducted census, and especially that portion relating to the vital statistics; and the importance of securing, at an early day, the services of a physician conversant with vital statistics, to assist in arranging the schedules in that department of the census to be taken in 1860; as also to aid in a general supervision over that branch of the census.

This resolution was adopted, and the following gentlemen appointed as the committee: Drs. Thomas Miller, Thomas Antisell, and A. Y. P. Garnett, all of D. C.

Dr. W. L. Sutton, of Ky., also offered the following resolution:—

Resolved, That a committee of five be appointed, whose duty it shall be to present to the next meeting of this Association a plan for a uniform system of registration of births, marriages, and deaths, including the nomenclature, as also the classification of diseases to be adopted in registration reports, and that the report from Dr. E. Jarvis to this meeting be submitted to their use for the balance of this session.

This resolution was also adopted, and the following gentlemen appointed as the Committee, viz: Drs. W. L. Sutton, Ky.; Edward Jarvis, Mass.; Edward M. Snow, R. I.; Wilson Jewell, Penn.; R. W. Gibbes, S. C.

Dr. Kyle, of Ohio, offered the following resolution, which was laid over till the next meeting under the rules:—

Resolved, That the Constitution of this Association be so amended as to prohibit the admission as a delegate, or the recognition as a member of any person who is not a graduate of some respectable medical college.

Dr. L. A. Smith presented resolutions of the Medical Society of New Jersey praying for such changes of the Constitution as would establish a Board of Censors in every Judical Circuit of the Supreme Court, who should examine and grant diplomas to all proper members of this Association. Laid over for one year under the rules.

On motion of Dr. L. Humphreys, of Indiana, the following preamble, resolution, and circular, were ordered to be incorporated in the Transactions of the Association, viz:—

Whereas, A circular, looking to the interchanges of the published *Transactions* of the various local Medical Societies of the United States, was unanimously recommended at the last meeting of the Indiana State Medical Society.

And whereas, It is in the power of this Association to promote and successfully carry out the object thereof; therefore,

Resolved, That we cordially approve of a general interchange of published *Transactions* between the various local societies of the United States, and that to carry out this desirable object the delegates of the various societies which publish their *Transactions*, be requested to leave the name and P. O. address of the Secretary thereof with the Secretary of this Association, which shall be published with its proceedings, and each society is hereby recommended to send by mail, prepaid, *three copies* of their published *Transactions* to all of the other societies included in such list.

On motion of Dr. H. Fraser Campbell, of Geo., it was

Resolved, That this Association has learned with deep regret of the death of the following permanent members of this body: Marshall Hall, *England;* C. R. Walter, Georgia; S. W. Clanton, Alabama; W. G. Craighead, Virginia; Jno. K. Downes, Connecticut; Nathan S. Pike, Connecticut; W. W. Morris, Delaware; and William Gries, of Pennsylvania.

On motion of Dr. Phelps, the following resolutions were passed unanimously:

Resolved, That the thanks of this Association are eminently due to the Regents and Professor Henry of the Smithsonian Institution, for the ample and convenient accommodation afforded for the transaction of business.

Resolved, That the Committee of Arrangements are entitled to our praise and highest appreciation of their exertions to promote the comfort of the members and the best interests of the Association.

Resolved, That to the physicians of Washington and Georgetown, and the faculty of Georgetown College, we accord the homage of our sincerest thanks for their elegant hospitalities extended to the members from abroad, by which the pleasure of their sojourn here has been so greatly enhanced.

Resolved, That we feel sure that the impressions on the tablet of memory received here in our national metropolis, in this the first year of the second decade of the Association, will long remain an evidence of the urbane attentions received not only from the Chief Magistrate and other public functionaries of our glorious Union, but of private citizens and the community at large.

Resolved, That the manifestations of union of heart and purpose, in the action of this session, inaugurate a new era, and call for devout acknowledgment to Divine Providence, and presage, as we trust, not only a bright future for the Association, but also as contributing to the perpetuity and prosperity of our great national confederation.

On motion of Dr. L. A. Smith, of N. J., Dr. Peter Parker, ex-Commissioner to China, was then introduced. He exhibited some curious specimens of *calculi*, as the results of thirty-eight operations upon Chinese. They were of various shapes and compositions, and weighed from a few drachms up to three, seven, and eight ounces.

Dr. Dunbar moved a reconsideration of the vote by which the resolution reported by the Committee on Nominations, asking the restoration of Dr. Bailey to the post of Inspector of Drugs for the city of New York, was adopted.

After discussion, the previous question was demanded and sustained, and under its operation a division was had, and the motion to reconsider prevailed—yeas 51, nays 32.

On motion of Dr. McNulty, of New York, the whole subject was indefinitely postponed.

The Association, then, on motion, adjourned until 5 o'clock P.M.

THURSDAY, *May* 6—5 *o'clock* P.M.

The Association assembled at 5 o'clock P.M., Dr. W. L. Sutton, of Kentucky, one of the Vice-Presidents, in the chair. Dr. T. L. Mason, of New York, moved an amendment to the Constitution, as follows:—

In first line, second paragraph, of Article II., after the words "shall receive the appointment from," to insert, "any Medical Society *permanently* organized in accordance with the laws regulating the practice of physic and surgery in the State in which they are situated, and consisting of physicians and surgeons regularly authorized to practise their profession." Laid over till next year, under the rules. To add to the sixth paragraph, Article II., "But each permanent member of the first class designated in this plan of organization shall be entitled to a seat in this Association, only on his presenting to this body a certificate of his good standing, signed by the secretary of the society to which he may belong at the time of each annual meeting of this body." Laid over till next year, under the rules.

Dr. Henry Hartshorne, of Pennsylvania, moved the following amendment to the Constitution, which was also laid over, viz.: To add to the second article, "No one expelled from this Association shall at any time thereafter be received as a delegate or a member, unless by a three-fourths vote of the members present at the next meeting to which he is sent, or at which he is proposed."

The amendments which were proposed at the last meeting at Nashville were then considered *seriatim*, on a motion to that effect. They were read as follows :—

Amend the third article of the Constitution, in relation to meetings, by inserting after the words "first Tuesday in May" the words "or the first Tuesday in June;" and also inserting after the words "shall be determined" the words "with the time of meeting."

In Article II. omit the words "medical colleges," and also the words "the faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates."

After some discussion, both the proposed amendments were rejected, two-thirds not voting in favor thereof.

Dr. John Watson, of New York, from the Committee on Ethics, reported as follows :—

Whereas it appears from undoubted testimony that the New York Medical College have conferred the degree of Doctor of Medicine upon a notorious quack, of the name of John F. Dunker, of Newark, the faculty, in the person of the President of said College, wish here to declare that this degree was obtained under gross deception, and false testimonials furnished by said Dunker and his friends; and they therefore revoke and annul his diploma, and declare said Dunker to be unworthy of patronage or support from authority conferred upon him by this diploma.

Dr. C. C. Cox, of Maryland, moved that the report be indefinitely postponed ; which was not agreed to.

On motion, the report was then adopted.

The amendments proposed by Dr. Stocker, of Pennsylvania, at the annual meeting in 1856, at Detroit, were then taken from the table, for consideration.

The following were the amendments proposed, viz. :—

Article III. Strike out all after the words "first Tuesday in May," and insert as follows: "The Association shall meet biennially in the city of ———. The place of meeting for the intermediate year shall be determined by a vote of the Association."

Article IV. In first paragraph, second line, instead of the words "two Secretaries" insert "one permanent and two assistant Secretaries." In fourth paragraph, fifth line, strike out the words "the Secretary," etc., and substitute, "The *permanent* Secretary shall preserve the archives and unpublished transactions in the permanent place of the meeting of the Association. His expenses for travelling to and from the place of meeting, and while in attendance upon the same, shall be defrayed by the Association."

Upon the amendment proposed to Article III., the vote was yeas 80, nays 42 ; and upon the first amendment to Article IV., the vote was yeas 84, nays 53. Neither of the amendments having received the constitutional majority of two-thirds, the President declared them to be rejected.

A motion was made to postpone indefinitely the second amendment proposed to Article IV.

Dr. Stocker moved to lay the motion to postpone upon the table.

Pending this, a motion was made to lay the amendment upon the table; which was agreed to.

Dr. Robert C. Foster, of Tennessee, offered the following resolution, which was adopted, viz.:

Resolved, That the Committee on Publication be instructed to collect all of the by-laws and resolutions, which have not been rescinded, through the different volumes of the *Transactions*, to arrange them under their respective heads, and append the same to the Constitution.

The following amendment to the Constitution was proposed by Dr. J. Berrien Lindsley, of Tennessee, through Dr. Bowling, of Tennessee, and was laid over, under the rules, viz.:—

In Article II. omit the words "medical colleges, hospitals, lunatic asylums, and other permanently organized medical institutions, of good standing, in the United States;" and also to omit the words "The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital, containing an hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution, of good standing, shall have the privilege of sending one delegate."

Upon motion of Dr. Kemp, of Maryland, the thanks of the Association were extended to those railroad companies which had agreed to pass the members to their homes free of charge; and also to all those citizens of Washington, including members of the press, whose courteous attentions had placed the Association under obligations.

On motion, the Association adjourned *sine die*.

A. J. Semmes, } *Secretaries.*
S. M. Bemiss, }

CORRESPONDENCE.

Report of cases of curvature of the spine treated by mechanical appliances. By J. A. Wood, M.D. (Continued from vol. iii. No. 3.)

Case 3.—Son of Mr. Otis Gay, of West Roxbury, Mass., aged 2 years and 1 month, of light complexion, and scrofulous diathesis, came under treatment for Pott's disease of the spine, June 15, 1855.

The deformity in this case consisted both of a lateral and angular projection of the spine, each well defined and strongly marked, as seen in fig. 1.

The former consisted of a bold reflection of the spine to the left, extending from the cervix to the sacrum, and the latter of an angular projection of the eighth, ninth, and tenth, dorsal vertebræ.

To avoid tedious detail, I give only a few of the leading facts in the history of this case, as related by the mother.

She informed me that the child had always evinced a peculiar weakness of the back from its birth, a few months after which an irregularity in the course of the spine was discovered.

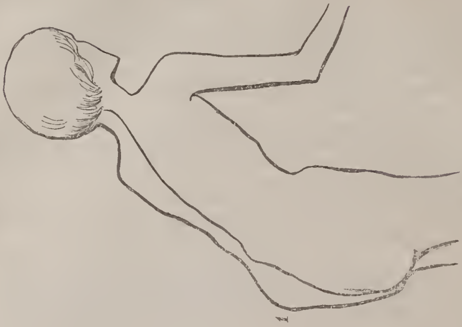


Fig 1.

There was a tardy development of strength, and a manifest want of the ordinary physical force and energy in the child, up to the age of 16 months, when it was suddenly attacked with apparent paralysis, and remained *perfectly* helpless for many weeks, with slight *occasional* febrile excitement, extreme paleness, and ultimate emaciation.

The recovery from this attack was protracted and imperfect; during which the deformity continued with a more rapid increase than at any previous period of the disease, and overpowered by all the contingencies in the case, the child had never been able to walk, up to the commencement of the treatment.

The body was thrown into such a position, by this distortion of the spine, that the abdominal viscera were pressed with great force into the left iliac region, presenting there the appearance of a large tumor, as seen in fig. 1, in the accompanying cut.

The early history of this case, and its subsequent developments, suggest the following inquiry. Is Pott's disease of the spine *ever* congenital?

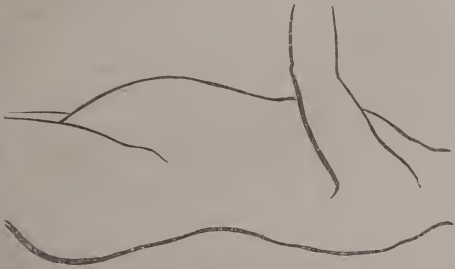
The treatment applied in this case, was simply mechanical, spring-like in its action, and comfortable to the patient, a generous diet and exercise in the open air.

Four days from the first application of the apparatus, the patient walked across the room, and four weeks from that time, he walked a third of a mile without any apparent fatigue.

By keeping the apparatus well adjusted, and supporting properly every part embraced by it, the general health and strength improved rapidly, the deformity gradually diminished until nearly removed, when the process was somewhat interrupted by inattention of those having charge of the child, to the instructions they had received. Consequently, there yet remains a *very slight* lateral variation of the spine, from a normal position, yet susceptible of removal, not exhibited in fig. 2, as the object of these reports is to illustrate more particularly, the result of treatment in angular curvature of the spine.

With this exception, fig. 2 illustrates correctly the result of treatment in the case.

Fig. 2.



The patient has grown rapidly, and for more than two years has been vigorous, robust, *fat*, and healthy.

Case 4.—Son of Mr. Horace Hopkins, of Chicago, Ill., aged 8 years, of light complexion, strumous habit, pale, emaciated, and sickly in appearance, weight, 36lbs. (precisely what it was four years previous), came under treatment for Pott's disease of the spine, March 3, 1857.

The disease had existed more than three years, and involved the 5th, 6th, and 7th dorsal vertebræ, producing at that point a formidable posterior projection of the spinal column, with its consequent results to the contour of the whole system, as seen in Fig. 3.

Anchylosis seemed nearly, or quite complete, and no encouragement was given as to the result of treatment, beyond an improvement of the general health, and, perhaps, to some slight degree the general form and figure of the patient, as circumstances would seem to forbid the accomplishment of more than that.

The improvement in the form of the patient, as the result of treatment, is shown in fig. 4, which may be contrasted with the one above to illustrate it more fully, both of which were drawn with care and accuracy.

The improvement of the general health and strength was still greater, as when first received the patient was able to walk a few rods *only*, without being obliged to rest ; but, at the expiration of two months, he had become strong, robust, and healthy, exercising vigorously upon his feet through the day, without any apparent fatigue.

The parents were then permitted to take the patient home. In May, after the lapse of one year, he returned again greatly improved,

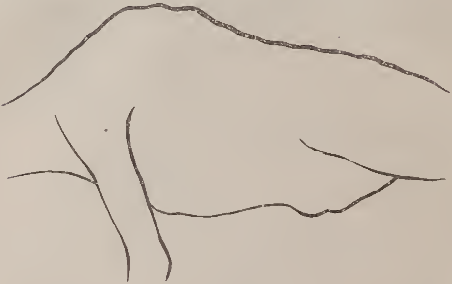


Fig. 3.

but not as much as he would have been had more particular attention been given to his case during the last six months, as the apparatus he wore had not been kept properly adjusted, being somewhat out of repair.

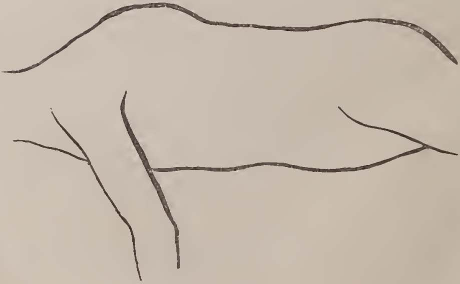


Fig. 4.

This case is reported more particularly to show the advantage of well-adjusted, appropriate, mechanical support to patients embarrassed and overpowered by the *burden* of *position* often enforced upon them by the destruction of some portion of the spinal column.

The treatment consisted in the adjustment and readjustment of an apparatus, briefly described in a former number of the *N. Y. Journal of Medicine*, galvanism, free diet, and what exercise the patient could bear.

*On the influence of blisters in quickening the effects of mercury upon the system.** By A. N. Bell, M. D., of Brooklyn, N. Y. *Case* 1. In May, 1843, I was called to a child, six years old, in a typhoid condition, who seven days before had taken a "worm-powder" from her schoolmaster. After taking the powder, her bowels had been open daily up to the time of my visit. I applied blister plasters to her ankles, and ordered an enema of spirits turpentine and castor oil. Early next morning I was sent for, and was surprised to find her salivated. She was wide awake, however, and complained bitterly of her mouth. The enema had been followed by three copious dejections including a large discharge of lumbricoides. The powder she had taken was ascertained to be four grains of calomel.

Case 2. About two years subsequent to this case, I was called to see a deaf and dumb old lady, who awoke on the morning of my visit with a very sore mouth, after having the day before scalded her hand while making soap. "Yesterday," she explained through an interpreter, "I burnt my hand, as you see, and this morning I woke up with the fire in my mouth." More than a week before, her bowels being confined, she had taken two pills that were left over from some other prescription. They did not operate much, but she felt relieved somewhat, and made no further complaint. The pills were the compound cathartic: she was salivated.

Case 3. The next case occurred nearly ten years ago, in a man who visited me on board ship, for a swollen elbow. As he could not speak English, and I could speak but little Spanish (it was on the coast of Mexico), I did not learn as much of his history as desirable, and only applied a blister plaster to the swelling, directing him to call again soon. He came next day, salivated. He had a bubo, and had been taking a blue pill twice a week for a month.

This class of affections has, more than all others, led me to the conclusion that *cutaneous irritation, during the presence of mercury in the system, is likely to develop its influence, or increase the activity of mercury when its influence is already manifest.*

In the treatment of *indolent* bubo, it has been my practice for several years either to apply blister plasters for the double effect of their local action and the mercurialization of the system, or not to apply them while the constitution is under the influence of mercury, unless it is desirable to increase its activity. In inflammation of serous membranes, in croup, or in any disease whatever, where there is a necessity for the certain and speedy action of mercury upon the system, we believe it can be hastened by a blister plaster.

---

* Read before the Brooklyn Medical Society.

Luxation of the femur into the sciatic notch (ilio ischiatic)—Reduction by Reed's method (Reported by Dr. Burrall, House-Surgeon to Bellevue Hospital).—During Dr. Parker's attendance at the hospital, Nicholas St. P——, aged 53, a mechanic by trade and a native of Canada, was admitted, and gave the following history:

Two days before his admission, while attempting to get on the front of one of the avenue cars as it passed him, he was shoved off by the conductor. The side of the car struck him upon the right hip, and whirled him about, causing him to fall at last upon the right side.

A measurement of the two limbs from the anterior superior spinous processes, showed them to be of equal length. The axis of the right thigh was directed through the left knee, and the right foot was somewhat everted. Adduction, and rotation inwards, were more easily accomplished than an abduction, and rotation outwards. When standing, being supported at the shoulders, the patient would rest his weight partially upon the affected limb. There was great prominence of the gluteal fold, and the right trochanter was further removed from the median line than that of the opposite side. The limb swung rather loosely when raised from the ground, the axis of the thigh still directed towards the opposite knee, and the foot turned rather outwards than inwards. The different manipulations gave a sensation like the rubbing together of two smooth, bony surfaces, and caused considerable pain. The right leg had been previously broken.

A consultation having been called, the patient was etherized, and the reduction of the limb easily accomplished by Dr. Parker. The patient's feet were then tied together, and he was carried back to the ward. There was retention of urine subsequent to the operation, which yielded to a few introductions of the catheter. The limbs, after the reduction, were of equal length. The patient was kept in bed for two weeks, when on rising he was able to walk easily with slight assistance, and soon after was discharged cured.

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THE NEW YORK
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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Description of a new Midwifery Forceps, having a Sliding Pivot to prevent compression of the Fœtal Head (with cases.)* By GEORGE T. ELLIOT, Jr., M.D., Physician to Bellevue Hospital; the Nursery and Child's Hospital; and the Lying-in Asylum; Corresponding Member of the Edinburgh Obstetrical Society. Formerly six months Interne of the Dublin Lying-in Hospital, and two years Resident Physician of the N. Y. Lying-in Asylum.

THE man who offers a new Obstetric Forceps to the profession, must be prepared to prove that he has not done so hastily, and that he can present reasons which are at least satisfactory to his own mind; while there is nothing so comforting to a large number of professional men as the frank confession that nothing on the score of originality is claimed.

I believe that the essential elements of the midwifery forceps, for all time, were discovered by the well-known accoucheurs whose names have become identified with the instrument; but that its benefits have been greatly extended by improved cutlery, and its adaptation to increased uses with diminished risk.

Nor do I believe that the ultimatum in this direction has yet been reached.

Moreover, the various modifications in the history of the instrument are unknown to the mass of the profession, while many of them are unattainable; and the choice of physicians is further limited by the fact that eminent men so modify practice in their respective cities, as to give you certain kinds of instruments, well made in one city, and the reverse in another;

hence an instrument may be introduced with advantage in one city, while it would be superfluous in another.

Again, there are gentlemen who would desire to procure, or cause to be made, an instrument that they had seen serviceable in the hands of a friend or instructor, and have a right to the opportunity of satisfying their wishes. And instrument makers furnish better instruments when the professional man, responsible for the model, can personally supervise them.

Nor, in my judgment, can the need of an Obstetrician be satisfied with one instrument, let it be made never so nicely; for the greater the degree of perfection, which it attains in one direction, the stronger the necessity that it lack some elements of perfection in another.

And the most that can be expected of an instrument is, that it successfully meets very numerous indications. I believe—

1. That the principal use of the forceps, in the immense majority of cases, is that of a tractor alone; and that compression is always in some degree injurious, and to be avoided if possible.

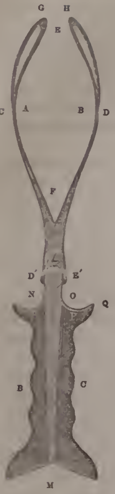
2. That this traction can be applied, and should be applied, by competent men, in well selected cases, even though the head so float above the brim as to be only capable of being steadied by the hand, introduced above the pelvic brim; and that thus the class of forceps, known as short forceps, would not in these cases meet the full requirements of the art.

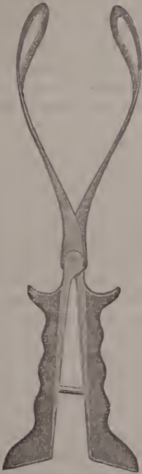
3. That this traction can be applied, and should be applied by competent men, in well selected cases, through an os uteri, as yet barely dilated sufficiently to admit the blades separately, and that delivery may subsequently be effected by dilating, or lacerating, or incising the os and cervix uteri; and that in many of these cases, the neglect of this procedure entails loss of fœtal life, demands the perforator, or perils the mother's life by delay, based on ignorance of the full capabilities of the instrument.

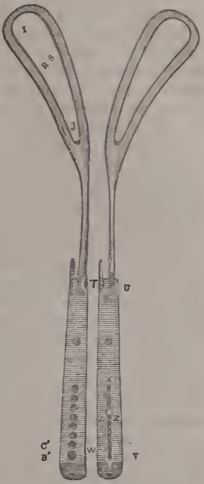
4. I believe in the existence of a large class of cases, in which a light and slender forceps can simplify delivery by altering the position of the head—a procedure inoperative and injurious, when performed with instruments of large pelvic curve—while its neglect frequently demands the perforator, or makes the difference between a safe operation, or one of the greatest risk, to one or both of the lives at stake.

5. That a forceps, capable of fulfilling all these requisitions, must, of necessity, be well adapted to those simpler cases, to which some men would limit their use, rendering them in the words of Dewees, "scarcely subservient to the art."

Thus the forceps now presented is made as light as is con-







Whole length of forceps	15¼	inches.	
A to B	$2\frac{11}{16}$	inches,	facc of forceps.
C “ D	2¾	“	back of “
E “ F	6¾	“	
G “ H	¾	“	
I “ J	4¾	“	
K “ L	1¾	“	
L “ M	6¾	“	
N “ O	⅝	“	
P “ Q	1⅛	“	
R “ S	$\frac{13}{16}$	“	centre of fenestra.
T “ U	⅝	“	
V “ W	⅞	“	
X “ Y	2⅜	“	
Z “ A′	⅛	“	
B “ C	1½	“	
Length of pin	⅞	“	

Thickness of blade R S ⅛th of an inch, a little thinner at the end.

N. B.—B′. This hole is sufficiently deep and wide to receive the entire pivot when it is not needed.

C′ is a little deeper than those above, so that the distance between the handles may be nicely graduated by the pivot.

D′ to E′. These overhanging projections serve to prevent any risk from slipping of the lock when the handles are widely separated.

sistent with strength, with its diameters as small as the indications given above, would seem to warrant; while the introduction of the *pivot* allows handles long enough to be grasped by both of the operator's hands, without fearing risk to the child from pressure, either when the fœtal head is large, or in those operations where it is utterly impossible now, and must ever be utterly impossible, to seize the head in any other way than by its oblique diameters.

In justice to myself, I must emphatically state the reluctance which I feel in presenting another forceps, lest I should seem to do so hastily, and from any other motive than the conviction that this instrument combines advantages, not offered in any that I have seen in Great Britain, France, or this country; or in any way be understood to suggest the idea that its possession was essential to operative success. I firmly believe that the chief thing to be desired is diligent education of the hand in the lying-in room; and no one is more ready to admit that one may well succeed with a very rough looking instrument, where a less skillful man has failed with a triumph of cutlery; but that is no reason why the operation might not have been better performed with the instrument, the very elegance and adaptability of which serves to increase the triumph of the successful man: and, perhaps, it is well to remember that the much injured Dr. Slop was certainly doing his best to keep up with his profession, and foresaw the advantages which have undeniably sprung from the use of forceps in competent hands.

The great difficulties that operative surgery, in all its branches, has to struggle with, is the manner in which the half educated and the uneducated blindly undertake, what they are incompetent to perform; and it is my earnest hope that in the hands of the inexperienced the slender, light, and yet powerful tractor here presented, may be used for the advantage of the patients, with diminution of some of the attendant risks.

That it has not been hastily decided upon, may be inferred from the fact, that since 1849, when I entered the Dublin Lying-in Hospital, my attention has been steadily directed to the development of unusual hospital and other opportunities; and during this time have repeatedly listened to the arguments of different men in favor of dissimilar instruments, which I have seen them skillfully apply, all the while sedulously guarding myself against the use of one especial instrument; owning ten different pairs, nearly all of which I have applied, besides using several pairs belonging to my friends (not to mention two applications of Simpson's Air-Tractor); replying steadily to my friends among students and physicians, in conversation and by letter, that one pair alone could not meet all contingencies, and that no one satisfied me entirely.

Gradually, however, Simpson's forceps became more and more my favorite instrument, and I have twice succeeded in applying them when a remarkably competent man had failed, from selecting an instrument with larger blades; and the advantages claimed for the subject of this article are:

1st. Absence of risk of compressing the fœtal head procured by the pivot.

2d. Greater opportunities for tractive effort, from the very absence of this risk; from the consequent lengthening of the handles; broader transverse bars—diminished spaces between points of blades—slightly diminished width of blades, and diminution of fenestra that increased strength might qaulify diminished thickness.

And if the principle of the pivot should give the satisfaction to others that it has given to those who have witnessed the cases hereafter to be narrated, it is well to remember that it can be readily introduced in any instrument for which an obstetrician may entertain any predilection.

I have always been accustomed to place a towel between the handles of my forceps when they would not come together, and have lost valuable time in replacing it and adapting it to changes in the mechanism of labor, which need not be lost with this pivot, as one finger moves it so readily.

Moreover, I believe that its presence is a constant reminder to the inexperienced operator of a danger to be avoided, and that one risk being thus certainly removed, he can proceed more confidently to his main purpose—the delivery of the child with safety to the mother.

The arguments glanced at in this article were developed at length in a course of lectures on Operative Midwifery, in Bellevue Hospital, last winter, when Mr. Ford, of the firm of Goulding & Ford, 85 Fulton street, offered to make these forceps for me, and after several modifications from suggestions derived from trial of the instrument at the bed-side, succeeded in making this, which has been used in the following cases, to my satisfaction.

The following are notes of all the cases in which I have used the instrument in the presence of professional men, having been in no way culled for publication. Those in Bellevue having generally been witnessed by the greater part of the house staff, and other physicians; while their examination will serve to show the character of the tests applied, offering, as they chance to do, examples of the most difficult applications and strongest traction that can be met with in midwifery; after which trials the forceps lie before me uninjured and ready for use.

That it may lose its head-curve some day is possible; the risk is inseparable from the advantages of a light and slender instrument. I have seen such things happen to stronger instruments in my hands and those of others (once in the hands of Dr. Shekleton, Master of the Dublin Lying-in Hospital, where they cannot be accused of exaggerating their estimate of the advantages to be derived from any but a limited use of forceps), and if it should, the man justified in using such traction would not thereby injure maternal structures, for if thoroughly understanding his business, and *pulling only with his arms*, he could not allow them to slip far; the more especially as he cannot deliver from the brim without anticipating such possibility at the period of rotation.

To give an example of such a contingency, I may mention that I purchased from Weiss, in London, a pair of Simpson's forceps, which were as nice looking a pair as I ever saw, and many a hard bed-side tug have they had without yielding, until—

Case 1.—*Illustrative of great tractive force—Forceps—Perforator.*—Called in consultation with Dr. Freeman to Mrs. M., a twin, whose sister had died after her second difficult labor. This one a primipara, 26 years of age, at full term, and had been in hard labor for eighteen hours. Second stage.—Os fully dilatable, soft parts cool, head presenting the 2d of Naegele, right occip. post, and wedged in superior strait, after commencing rotation; no fœtal heart appreciable, but strong uterine souffle; Simpson's forceps, preceded by chloroform and baptism; *tremendous tractions, until one blade straightened completely.* Another pair; no better success. Perforator and crotchet now used; hard work. Finally replaced the forceps around the diminished head, and effected its delivery. Shoulders could only be extracted with the blunt hook; tight work even with the breech. Child must have weighed fully 13 lbs. I saw her afterwards, when she was doing well, and I believe that she has done well since.

Remarks.—My reason for making such great efforts with the forceps, even when the fœtal heart was entirely inaudible, was the fear that its position might obscure it; for who has not known the fœtal heart in the presentation of the post. font. to the right sac. il. syn. become audible after rotation alone? I had previously put as much force on that pair of Simpson's forceps without injury to them.

Case 2.—*Puerperal convulsions—Forceps—Safety to mother and child.*—Catharine Murphy, aged 18, unmarried, primipara, fell in labor at Bellevue Hospital at 4.30 A.M., January 16th, 1858. Drs. George S. Hardaway, House Physician, and Henry F. Andrews, Senior Assistant. Pains strong till half-past seven, when she was seized with a strong convulsion. Muscles strongly contracted; face deeply congested; teeth clenched; foamed at the mouth, but did not bite her tongue. After the convulsion the respiration was stertorous, and the face remained congested for some time, pupils acting sluggishly. After this, the pains were less frequent and feeble. Urine drawn off in a catheter, and found to be slightly albuminous. 9 A.M. Convulsion, similar in character and consequences. Os fully dilated. Ant. fontanelle down in a line a little in advance of right eminentia-ileo-pectinea. Posterior fontanelle a little in advance of right sacro-il.-syn. Fœtal heart most distinct at junction of supra-pubic and right iliac regions. Dr. Elliot ruptured the membranes at 11 A.M. Pulse, 92. 1 P.M. Tr. Ergotæ ʒj. 1½ P.M. Another strong convulsion, during the stertorous stage of which Dr. Elliot applied his forceps with the pivot, and delivered without delay. No mark was left on the child, although one blade was applied over the face, and one over the occiput, rotation not having fully taken place. Perineum somewhat lacerated. After delivering, hyd. chlor. mit. ℈ss in butter on back of tongue, and in two hours ℥j ol. ric. Half stupid till 4 P.M., when she had another convulsion, leaving her face deeply congested. Pulse 90, full and laboring. Put in a sitting posture and bled to ℥xvj. Pulse became now less frequent and softer. No signs of syncope. Medicine operated freely at 5½ P.M. Removed to a quiet room, and ice applied to her head. 7 P.M. Rational and easy; pulse 104, soft. 7.35, 96. 9 P.M. Another convulsion; 4 c.c. to nape of neck. Slept quietly all night. 17th. Pulse 84–88. Condition good. Child well, weighing six pounds. Both made a good recovery.

A sample of blood was carefully examined by Prof. Doremus, and found to contain no urea. Microscope disclosed granular renal epithelium, waxy casts, and blood corpuscles.

Remarks.—This case enabled me to test the value of the pivot in an unusual application of the forceps, and by moving it high up, opposite the point where the handles could be kept from farther approximation, no trace of the application was left on the child.

Case 3.—Delivery with forceps, for the sake of the child—Neck encircled six times by funis—Safety to mother and child.—My friend, Dr. Eustace Trenor, sent for me on the 31st of January, 1858, to see Mrs. H., a primipara, aged 27, at full term, well built, robust, with a well formed pelvis. Seen by Dr. T. at 8 P.M., 30th. Membranes then ruptured three hours. Pains irregular and feeble. Condition good. Os just admitted a finger. Summum of fœtal heart intensity to the left. No uterine souffle. 6 A.M., 31st.—Os fully dilated. Pains strong since 3 A.M., and so continued until delivery. 9.30. A.M. Dr. Trenor sent for me, on account of non-advance of the head, anxious expression of patient's countenance, and dry tongue, and because he could not satisfy himself that the fœtal heart continued audible. I saw her at 11 A.M. Head pressing against bony outlet. Post. font. to right acetab. Vagina cool; perineum rigid. Fœtal heart extremely indistinct, but yet, as I thought, audible. Decided to deliver, principally for child's sake. Applied forceps, with concavity directed to right acetabulum. *Did not need pivot.* Delivered promptly a living child, weighing 6½ lbs., *with cord six times around neck.* Patient under the influence of chloroform given by Dr. T. Placenta came away nicely. On cutting the cord close to the placenta, we wrapped it six times around the child's neck, when the small amount left satisfied us that it was the probable cause of delay.

Case 4.—Forceps—Living child—Death of mother from puerperal fever.—Rose Swift was delivered by these forceps, in Bellevue Hospital, on account of arrest of the head, probably from exaggerated flexion. The particulars of the case are published in the New York Journal of Medicine for July last.

In applying the instrument, it occurred, from the position of the head, that the points of the blades reached the temples, just above the zygomæ, and the handles, of course, not coming together, the pivot was adjusted to obviate risk from pressure. The delivery required strong effort, but left no trace. Dr. Barker was present, and liked the instrument so well that he procured a pair. Child weighed 9 lbs.

Case 5.—Contracted outlet—Arrest—Forceps—Perforation—Safety to mother.—On the 26th of March, at 9 A.M., I was requested by Dr. Cadmus to see a primipara, aged 30, who had been in the second stage of labor, with good pains at least twenty-two hours. I found her with a tender abdomen, a very dry and hot vagina, and a diminished outlet, with an excessively rigid perineum. Pulse and expression good. Fœtal heart distinct to the left below the umbilicus. Head presenting, with posterior fontanelle to the *left* sacro-iliac synchondrosis—the movement of descent barely completed.

The condition of the mother, the disproportion of the presentation, seemed to me to clearly indicate necessity for interference, which was accordingly attempted in the presence of Dr. Cadmus and Dr. ——.

The woman having been brought under chloroform, I desired of course to seize the head by the bi-parietal diameter, with the concavity of the blades to the right, but the relations of fœtal head to pelvis prevented me from seizing it otherwise than by the oblique diameters, which I reluctantly consented to after careful manipulation, and the size of the head demanded that the pivot should be advanced to the highest hole. Now made every effort which I could to rotate or advance the head, first trying to turn the occiput towards the pubis, then in the hollow of the sacrum, or to dislodge it in any way from the position which it had so long occupied, with such risks to the mother. But my efforts were utterly unavailing, though they were continued until there was no alternative for the conviction, and tested alike the tractive force of the instrument, and the reliability of the pivot to prevent compression. When convinced of the impossibility of delivering the child alive, I pushed back the pivot and drew on the head, until the capability of the instrument to act as a compressor was demonstrated by its deep traces, but all without success. Determined to try them fully, I braced my feet firmly, and pulled myself out of breath before they yielded, and when they did, no alteration of position whatsoever had been effected. It was deemed useless to replace them after the trials which had been made, and I delivered a large male child with the perforator and crotchet. No waters of the amnion followed, or hemorrhage, but a stench came after the child which augured ill for the chances of metritis. But, under Dr. Cadmus's care, the woman has entirely recovered.

Case 6.—Convulsions—Albuminuria—Forceps—Both doing well—Dr. E. W. Lambert, house-physician.—A. McKay, unmarried primipara, in Bellevue, aged 19. Labor pains commenced at 7 P.M., Aug. 2d. Waters broke while asleep at 9 P.M. Head presenting; os the size of a dollar, and very dilatable. Second fit at 10 P.M.; third in twenty minutes. Chloroform now, and Dr. Elliot sent for. I went immediately with Dr. Wm. T. Green Morton, of Boston, who happened to be with me; applied the forceps, placing the pivot in the second hole, and delivered a living child without any laceration of perineum, although the vulva was very narrow. Placenta gave no trouble. Chloroform kept up for about twenty-four hours. Whenever the patient came from under its influence a convulsion would occur. Urine drawn with catheter, highly albuminous, though there was *no trace of œdema*, no congestion of face after convulsion. Spec. grav. 1.018; no blood; c.c. no. v. to kidneys; emp. vesic. to nape of neck. No attack of convulsion after midnight of the 3d. Vomited a great deal subsequently, relieved by the dilute hydrocyanic acid. Aug. 8th. Doing well.

Remarks.—In this case the forceps were introduced entirely within the os uteri, which readily dilated before the tractions with the instrument.

Case 7.—*Pelvic presentation in an under-sized pelvis—Room singularly obtained for forceps—Child dead—Mother did well.*—Jane Holland, 24, second child. In labor in Bellevue from Feb. 18th, 2 A.M., to Feb. 19th, 2.45 A.M. Drs. F. A. Burrall and N. Barrows. Child still-born, weighed 7¾lbs.

Two years since she was confined with an eight months' child, "cross birth," lived three weeks. Now at full term. Feb. 18th. While preparing for bed, membranes ruptured without previous pain. Came immediately into lying-in wards, when the left foot was distinguished high up, back of fœtus to left acetabulum. Dr. Elliot summoned, and arrived at 1 A.M., Feb. 19th, just as the knee had reached the vulva. 1.40 A.M. Pains being very severe, chloroform given moderately, and in a few minutes the body of the child passed. After the hips had passed naturally into the world, a loop of cord was brought down which could not be felt to pulsate. Motions of the child but an instant before had given signs of life, and showed its danger. Arms being delivered, and the head refusing to yield to traction or the customary manipulations in these cases, Dr. Elliot passed the first blade of his forceps promptly to its position, but the large head of the child so pressed against the right pelvic brim, as not to afford any space for the second, and all hope of saving the child soon fled.

The perforator was sent for, and while making considerable effort to force a dull instrument through the occipital bone, Dr. E. felt the head to rise sufficiently on the right side to allow the passage of the second blade, when dropping the perforator, he applied his forceps, and delivered with difficulty. The uterus not being promptly followed down, hemorrhage followed to an extent which demanded sharp treatment. Did subsequently perfectly well. Child still-born, weighing 7¾lbs.

Remarks.—On some future occasion I shall have something to say of the dangers to fœtal life in pelvic presentations, and the necessity of being always ready to apply forceps when manipulation fails; and I may here introduce a case in point, as *the instrument used possessed the same blades as those here described.*

Case 8.—*Forceps in breech presentation—Rotation backwards of chin.*—A patient of mine, with an under-sized antero-posterior diameter of brim, had been delivered by me of a living child (whose parietal bone was marked by the promontory) with forceps. Falling in labor again, she sent for me, and I took my friend Dr. J. W. S. Gouley with me. We found a large dead child, with the shoulders born, and hanging by the head, the chin having caught over the linea ileo-pectinea, a little to the right of the eminentia ileo-pectinea. Applying the forceps, I rotated the chin backwards, when, depressing it, I delivered with a promptness which would probably have saved the child's life, had they sent for me earlier.

Case 9.—Deformity of antero-posterior diameter of brim—Forceps—Version—Perforation—Recovery of mother.—Mary O'Connell, 33, third, Bellevue, Drs. Andrews and Maury. Labor commenced May 15th, 10 P.M., L.O.A. Terminated May 16th, 11.15 P.M. Child still-born, girl, 9lbs.

Patient short stature, apparently well formed; married ten years; first child delivered naturally, and living, though somewhat before the full time. Four years later delivered, after a tedious labor, of a still-born child. Mary was one of these unsatisfactory patients from whom one can with difficulty learn anything, and when the answer is obtained, one has to suspect that almost as much as the previous uncertainty. However, at 7 P.M., 16th, Dr. Andrews, on carefully examining the patient, appreciated the presentation and position, and rupture of membranes, and detected a diminution of the antero-posterior of brim to somewhat less three inches. He sent for me. I agreed with him entirely; believed it impossible for the child to pass, and anticipated very hard work. Sent for my colleague, Dr. Barker, who recognized the deformity, which was probably due to exostosis, and agreed perfectly in our views of the operative procedure, viz., forceps first, and if they failed, version. Pulse 70; condition of patient excellent. Anterior lip, however, down before the head and œdematous, though readily replaceable. At 10 P.M., then, things being in this condition, no advance having been made, the head above the brim dipping the arc of parietal bone formed by the plane of the brim alone into the superior strait of the true pelvis, I applied my forceps, which were promptly adjusted and locked. I then made traction with all the strength which my arms afford, sitting at one time on the floor, and pulling in the direction of the superior strait with all my might. During one of these efforts I felt them slip slightly, and instantly stopping, re-adjusted them, and continued until all were satisfied that traction was of no avail.

I then withdrew the forceps, and passing my left hand within the uterus brought down the right foot. This was not sufficient, as the other caught above the pubis, and was brought down with some difficulty. The hips being delivered, the cord was found to pulsate feebly. The arms were readily brought down, but no manipulation would suffice with the head, which having necessarily turned with the sagittal suture parallel to the transverse diameter of the pelvis, happened so to close the right side as to forbid all hope of introducing the second blade of any forceps. The cord now ceased to pulsate. Being by this time pretty well fatigued, Dr. Barker endeavored to bring the head through, but it was too firmly wedged to pass. I then introduced the perforator midway between the occipital protuberance, and the mastoid process, and rattled Churchill's crotchet freely about within the cranial cavity. I then tried to introduce Dr. Thomas's ingeniously contrived craniotomy forceps, but although the blades are only the breadth of the middle finger, there was absolutely no chance for the second blade. Having then hooked the crotchet firmly over the occipital bone, Dr. Barker and I relieved each other in our tractions. He made two efforts, and in my third, the head finally passed, one hour and fifteen minutes after the commencement of the operation.

The woman recovered perfectly, although there was puerperal fever at the time in the house, justifying thus what I sincerely believe to have been excellent practice, viz. in commencing the operation before the patient was exhausted by fruitless effort, and reflecting great credit on Dr. Andrews for discovering and appreciating the pelvic deformity when he did, instead of simply satisfying himself that there was a head presentation in a woman who had born a living child.

Case 10.—*Convulsions—Albuminuria—Absolutely unyielding os and cervix — Douche — Incision —Forceps—Still-born child—Mother died.*

The following case is in the words of my friend Dr. Samuel Rotton:

Catherine H——, aged 26; primip. I was called upon to attend this patient at the solicitation of Dr. James Hyslop, as he had a previous engagement in another part of the city. The patient had for the previous month or six weeks complained to her friends of swelling of the hands and arms, and of the whole of the upper part of the body, and also a puffiness of the eyelids which made it unpleasant to move them; the urine was scanty and at times highly colored. She asked no advice, as she was assured by her friends that it was nothing unusual. She had during the afternoon walked to her sister's, a distance of more than two miles. Shortly after arriving, she was troubled with labor pains, and through the evening, as they increased in severity, slight convulsions accompanied each pain. When I first saw her at 1 A.M., the convulsions were so severe that she did not recover her consciousness afterwards. I found the os slightly dilated, but not more than sufficient to pass with difficulty two fingers, and quite undilatable. The bladder was distended, and I drew off with the catheter about 20 ounces of dark bloody urine. I put her immediately under the influence of chloroform, and kept up its effect until 4 o'clock P.M., during which time she had but one convulsive paroxysm which occurred while my attention was drawn from her for a short time, so that she passed from under the influence of the chloroform; but during this whole time, with every pain, there was a threatened convulsion which was subdued only by the chloroform. I administered nauseating emetics, and abstracted blood in the hope of procuring dilatation; but at the expiration of 12 hours, the os was as undilatable as at first. I could not at any time hear the fœtal heart, but thought that several times I heard the placental soufflet. About 3 P.M., she seemed to be sinking fast, the pulse sank rapidly to 18, and the respiration to 7 in the minute; I again bled her, and the pulse returned to 90, and the breathing became more frequent and less labored.

I had sent for medical assistance, and Dr. Gouley now arrived; we injected about three gallons of warm water against the os in hopes of dilating it so as to apply forceps; but it remained as rigid as a board. After partially dividing the os on one side, one blade of a pair of rather heavy forceps belonging to Dr. Hyslop was introduced, but it was impossible for either of us to introduce the other blade, and if even the fingers were passed up some distance by the side of the blade, the contractions were so violent as to cause the operator great pain by the compression of the fingers against the iron. We found that with these forceps it would be impossible to deliver, so we sent for Dr. George T. Elliot. With difficulty, Dr. Elliot's forceps, which were much lighter and of very superior shape, were introduced by him, and the delivery accomplished only after dividing the os on both sides.

The child was dead. A warm injection was administered, the bloody urine again drawn off, an active purgative given, and cups applied freely over the kidneys; but the patient did not rally, and died about midnight. The friends would not allow a post-mortem.

[This was probably as well marked an illustration of an absolutely rigid os and cervix as could be presented.—E.]

Case 11.—*Arrest in inferior strait—Forceps by Dr. E. W. Lambert.*—Sarah Rodgers; single; aged 23; 1st L. O. A.—From Aug. 2d, 10 A.M. to Aug. 3d, 9 A.M. Bellevue Hospital.

The head was detained for seven hours in the inferior strait before fairly reaching the outlet. Perineum very rigid. Dr. Lambert, the House-Physician in charge, sent for me to see the case at 4 A.M., Aug. 3d. He attributed non-advance to contraction of outlet. The pubic arch admitted two fingers parallel to each other beneath the pubis; the point of ossification between the rami of the right pubis and ischium was certainly too convex. Advised delay, and left subsequent operative interference to the discretion of Dr. Lambert. He waited four hours, and then applying these forceps, delivered a living male child weighing 8 lbs. without lacerating the perineum, although there was very great risk of doing so. Pivot placed in first hole. No traces of blades. *Aug. 8th*, P.M. Both doing well.

Case 12.—*Contracted pelvic brim—Arrest—Forceps—Child still-born—Mother recovered—Vesico-vaginal fistula.*—March 28th, 1858.—Mrs. Barnett, aged 32, fell in labor with her second child, under the care of Dr. O'Rorke. 6 A.M. He found the membranes ruptured, and that she had been in labor ten hours. Os fully dilatable. Presentation cranial, and above the brim; fœtal heart beating; mother's condition good. Twelve hours after this, at Dr. O'Rorke's request, I saw the patient with him. Dr. Kiernan was also present. Mother's condition good; abdomen a little tender on pressure. Fœtal heart and uterine souffle distinctly heard at the same site, viz.: just below the umbilicus on the left side. Pains growing weaker. Outlet well formed. Ant.-post. diam. of brim seemed a little over three inches. Head not engaged in brim. Sagittal suture transverse. Fontanelles not clearly to be distinguished. Pelvis shallow. It was decided to apply forceps, because of pelvic contraction, non advance, and suspicious fact that the first child was still-born. Chloroform by Dr. O'Rorke. Forceps applied over the oblique diameter, extending from left orbit. Having exerted all my strength to no purpose, Dr. O'Rorke relieved me, and advanced the head; as rotation commenced, the forceps slipped somewhat; when having re-applied them, I resumed my tractions with all my force, and withdrew the head. The child gasped when born, but could not be revived. Perineum lacerated. Placenta came away well.

March 29th.—Pulse 120; pain over uterus. Blister 6 × 8 and mercurial ointment; with opium internally.

The traction made by the forceps in this case was very great, and Dr. O'Rorke expressed his surprise that the instrument could bear it.

She recovered well, but complained of water dribbling from her if she stands, or lays on either side. When she lies quietly on her back there is no flow, and she can retain her water all night. I made an examination, which, however, was not very thorough, as I desired to send her to Bellevue, where she could have better opportunities for treatment; and inclined to the opinion that the case was one of incontinence. My colleague, Dr. Taylor, has made two thorough explorations, and has discovered, on the last occasion, a small opening to the left of the vesical termination of the urethra, in which a small probe can pass. The result of treatment shall be reported hereafter.

The fistula is in a site where there was no pressure either from the head or forceps, and I cannot understand how it occurred. It is the first result of the kind which has ever followed any midwifery case in my practice, operative or non-operative.

Cases 13, 14, 15, 16.—In reply to a note which I addressed to Dr. B. F. Barker, inquiring what experience he had had with these forceps, he replied:

"I have used your forceps in four cases, and they have excellently answered my purpose.

"The first case was a primipara; presentation, right occipito-iliac posterior, the head descending into the cavity, and the occiput rotating backwards. After waiting some time, I became satisfied that delivery would not be accomplished by the natural efforts. With your forceps I rotated the occiput under the symphysis, and completed the delivery with great ease.

"In the second case, also that of a primipara, the forceps were used on account of a narrow vulva, and a rigid perineum, the uterus having become exhausted from the protracted labor. The head was at the lower strait.

"In the third case, the forceps were applied while the head was at the superior strait, immediate delivery being rendered necessary by convulsions.

"In the fourth case, the head was delivered by the forceps after the body had been delivered by turning.

"All of the children are now alive, and the mothers made a good convalescence."

Case 13 affords an interesting example of what should always be at least attempted, and tempts me to record a case of great interest to me, and having a direct bearing on the subjects of this article, as illustrative of successful rotation with Dr. Simpson's forceps in a difficult class of cases.

Case 17.—Mary Jones, aged 19; first; Bellevue. Dr. C. Haasse, house-physician. In labor from Nov. 10th, 1857, 11 P.M.—12th, 6.40. Child, girl, weighing 8½ lbs. Both did well. First seen Nov. 11th, at 2 A.M., by Dr. Haasse. Os just admitted the finger. Membranes broke at 4 A.M. Os then dilated to the size of half a dollar. Pains good, but little progress till 9 A.M., when they ceased. Morphine then enabled her to sleep, from 10 A.M. till 3 P.M. Dr. Haasse then made out face presentation. Caput succedaneum on right frontal protuberance. Chin directed nearly back to right sacro-iliac-synchondrosis. 5½ p.m. No perceptible progress. Dr. Elliot delivered a living child with Simpson's forceps, rotating first the chin to the pubis.

Remarks.—I have seen but three cases of face presentation which required interference; one with Dr. I. E. Taylor, in which he turned; and

Case 18.—One to which I was called in consultation, and to which I also invited Drs. Metcalfe and Charles D. Smith. The patient was a primipara—the presentation had not been recognized, and the eye had been pushed out by repeated examinations, and hung from the denuded orbit. No fœtal heart. I applied two different pairs of forceps, and neither Dr. Metcalfe nor myself could move the head; when I perforated through the orbit, and the mother made an excellent recovery.

Case 19.—*Prolapse of funis—Dr. Thomas's plan—Forceps—Living child—Mother did well.*—Joanna Burke, aged 24; 1st; Bellevue. Drs. H. F. Andrews and R. B. Manry. May 9th, 1858, 10 p.m. Os size of a dime, membranes to be felt during a pain. 4.45 a.m. Membranes had ruptured; water gone; several loops of funis without the os uteri, and pulsating strongly. Dr. Andrews faithfully tried to reposit the cord by Dr. Thomas's plan (*vide* vol. iv. p. 241, N. Y. J. of Med.), but without success; patient unruly. The woman was kept in Dr. Thomas's position for more than an hour; I was then sent for, and the patient placed on her back, and chloroformed to stop risk from uterine contraction. Went instantly, and arrived a few minutes before six. Directed Dr. Lambert to spring on the bed and hold the woman's hips in the exact position recommended, detailing another gentleman to watch the respiration, as she was fully under the influence of chloroform; and by introducing my whole hand in the vagina, succeeded in repositing the scarcely pulsating funis within the uterus, to such an extent, that the two fore-fingers, buried within the uterus, could barely touch it. But when the next pain came on, it drove the funis up the reversed superior strait, so as to fill the vagina to the vulva. There was no time to lose; and having the woman rapidly placed on her back, I delivered her with all haste possible. The head had barely completed the movements of descent, and was yet in the superior strait; and my forceps were thrown over one oblique diameter, and the child delivered almost as rapidly as I can write this description. The pivot was not regarded much, and the child was marked over the lip with one blade, a result which could have readily been avoided, if I had adjusted it accurately before making my tractions. But I had waited so long for the hope of success, in the manœuvre described, that I did not dare delay one instant.

The child was asphyxiated, but was restored to life. It died on the fourth day, from inanition, with which I think that the sore lip had something to do.

Remarks.—I have since had an opportunity of repeating this manœuvre, in a case where there was originally presentation of edge of placenta, hand and foot, which became complicated with prolapsed funis.

Case 20.—*Placenta prævia—Presentation of foot and hand—Prolapse of funis—Adherent placenta—Hemorrhage—Child born alive—Mother did not recover.*—Consultation with Dr. Eustace Trenor; report condensed from his notes. Mrs. Kane, aged 30, has suffered for several years from bad health and bad habits, and has on three occasions flooded seriously after miscarriages. Last March, when six months gone, she was much excited in endeavoring to procure bail for her husband, who had been arrested for disorderly conduct. On the next day she had a moderate attack of hemorrhage, controlled by Dr. Trenor. Two subsequent attacks were controlled by Dr. E. Hoffman.

June 2d.—She was awakened during the night by labor pains, followed by liquor amnii, when the pains ceased, and she flowed profusely. Dr. Trenor saw her in about three hours, and found her rather pale, with a quick and somewhat feeble pulse of about 88, complaining of weakness, and somewhat restless. Os uteri pretty high up, dilated to about the size of half a dollar, rigid, thick, and filled with a clot. At Dr. T.'s request, I saw her at 7 P.M., when the pulse was 83, moderately strong; lips somewhat blanched; expression pretty good; no dizziness or dimness of vision; voice strong; abdomen flaccid; long axis of uterus transverse; fœtal heart in right lumbar region; no clots in vagina; no flow of blood; an old fœtid clot, weighing about ℥ij. lying within the os. No central implantation of placenta, and no placenta felt at that time. Os uteri dilated to the diameter of 1½ in., and not in any way dilatable. Two fingers passed within detected either an olecranon process, or an os calcis. It seemed to me most likely the former. The tips of either fingers or toes could also just be touched. I thought them most likely the fingers.

11 P.M.—Saw the patient again with Dr. Trenor and Dr. Maury. Pulse 78; moderately strong. Expression better. No hemorrhage. Os as before. Presenting parts not reached more readily, but a flap of the stringy placenta now recognized hanging to the os on the right side.

June 3d.—Has vomited once or twice during the night, and then slept quietly. No hemorrhage. Condition rather better. Slight pains commencing. Os uteri softer. At noon, Dr. T.

found that dilatation was slowly progressing under the influence of moderate uterine contractions. Ordered ℥j. ol. ric., as the bowels had not been moved since May 30th.

At about 4 P.M. *Dr. Trenor called on me, and stated that a loop of the cord was now presenting at the os uteri and pulsating.*

Went immediately and placed the woman most accurately in the position recommended by Dr. Thomas, and introducing my left hand entirely within the vagina, returned the loop so deeply within the uterus that it could just be touched by my two forefingers buried within it. I thus retained it during two pains, my fingers, in the direction given to the superior strait, pointing downwards and towards the bed. In the interval that followed the second uterine contraction, I withdrew my fingers, and found, to my regret, that the next pain drove the cord *up* the inclined plane of the superior strait into the vagina. A repetition of this manœuvre was attended with a similar result. Not deeming it prudent to delay longer, but maintaining the woman in the same position, I turned my attention to the os uteri, which I now found dilatable enough to admit my hand sufficiently far to recognize, first, a hand, which I dropped, and then a foot, on which I drew (the woman all the while in the same position), until I had drawn the thigh into the world, when I turned the patient on her back, and rapidly completed delivery. The child gasped, breathed, had a good color, and gave every sign of reviving, and then disappointed my carefully-founded hopes by dying, in spite of every effort used for restoring life.

I had no post mortem, but have seen children die suddenly in this way, just after a natural labor, in which there had apparently nothing untoward occurred. The liver seemed, however, in this case, to be noticeably large.

The uterus, meanwhile, had firmly contracted around the placenta, ʒij. of Canavan's fluid extract of ergot having been given immediately after the birth of the child, but Dr. Trenor called my attention to the fact that blood was flowing in a continued stream from the vagina. On introducing my hand into the uterus, I regretted to find that the placenta was everywhere adherent, except at the flap alluded to, and removed it with some trouble, being obliged to leave some pieces which could not be detached without bringing the uterine wall with them. The flooding diminished, and the uterus contracted, but not firmly. ʒiij of ergot and brandy given. Her expression, behavior, and pulse were now such as to threaten instant death. Dr. Trenor went, at my request, for Dr. Van Buren, to transfuse the patient. It was, however, nearly two hours before Dr. V. B. arrived, and by this time the hemorrhage had been controlled.

During all this time her head was thrown down, arms and legs held up, ice over the fundus, while I carefully grasped the uterus with one hand, which at the same time compressed the aorta through the yielding abdominal walls; and with the other, with the aid of ice in the vagina, irritated the cervix, in the hope of reflex action, and thus, with the aid of ergot, brandy, chafing, and hot cloths, after an hour and a half hard work, rallied the patient, whose pulse had twice disappeared from her wrist. I have seen a number of bad cases of flooding, but never saw one so near death recover, except a woman with placenta prævia, in the Hôtel Dieu, in Paris, whom Nélaton successfully transfused, though she afterwards died from metro-peritonitis. The pulse shortly rallied after vomiting, and at 8.30 was 120, very feeble, and the patient restless, sighing, and tossing about, with a very feeble and exhausted expression.

My mind inclined to the propriety of transfusing her then, but it was concluded not to do so.

June 5th, 10.30 A.M.—Since the last note, Dr. Trenor has carefully fed the patient on beef tea, brandy and opium, and she has rallied. Ergot kept in readiness, quinine and sulph. acid given, and a blister has been applied over abdomen, to anticipate metro-peritonitis.

June 6th, 4 A.M.—Dr. Trenor was sent for in haste, as the patient had been flowing freely since 1.30 A.M. By the time he had reached the house, the patient had taken ʒjss. tinc. ergot. A sheet and three smaller cloths were covered with blood, and there was a great deal in the bed. The patient was blanched, almost pulseless, and too feeble to speak above a whisper. On examination, the vagina was found filled with a large clot, and the uterus with another, both of which were removed. The uterus was flabby and enlarged. ʒss. more of the tinc. ergot, with irritation of the cervix by the fingers, brought about a lazy uterine contraction. Brandy was given freely, and the uterus compressed by the hand; but the hemorrhage persisting, Dr. T. plugged the vagina with strips of oiled linen, and finally brought about firm contraction, which was insured by the hand for three hours, when the binder was reapplied. During these three hours Dr. T. had kept the head down and the arms and legs in the air, and had given brandy somewhat freely. The pulse, at the wrist, was now but just perceptible, and sensation in the legs almost gone. She complained of darkness, her lips were blue, and the skin of the upper lip and towards the alæ of the nose acquired a dusky hue. After the application of the binder, brandy and beef tea were given, and she gradually rallied, sleeping at first, and afterwards becoming restless, throwing herself on her side, and from one side of the bed to the other, suddenly. 10 A.M. Pulse 124. Has vomited five or six times, and taken $\frac{3}{4}$ gr. of opium. 2.45 P.M. Suddenly attacked with a violent fit of vomiting, throwing off in all about a quart of fluid—at first the nourishment which she had been taking, and then matter of a dark greenish hue, with greenish and very dark flocculent matter in it, and without odor. In about fifteen minutes a violent chill came on, lasting some fifteen minutes, when some reaction came on.

June 7th, 11 A.M.—Tampon removed from vagina. During the night had several hard chills, one of them apparently excited by swallowing ℥ss. of Labarraeque's Solution, given by her mother-in-law (who also stupidly threw away the placenta). Stomach very irritable; takes very little. Some attacks of faintness. Coughs, with pain in the ovarian regions. Pulse 124. 4 P.M. Pulse 140. Resp. 30. Abdomen more tympanitic, and tenderness spreading upwards laterally. Micturition causes severe pain in the hypogastric region. The skin is covered with a cold perspiration, and dusky, livid spots are appearing on the thorax anteriorly. Ordered, every three hours, ʒj. of a solution of the sulphate of morphia, gr. iiss.–℥iv. of water.

June 8th, 10 P.M.—Under the influence of morphia. Pupils contracted; patient quiet and sleepy. Spots disappearing from thorax. Pain less acute, but more extensive. Pulse 116, stronger and fuller than yesterday. Respiration 36. Continue morphia, and ol. tereb. gtt. x. every second hour, and an enema containing ol. tereb. ʒij. and ℥j. ol. ric. in emulsion.

5 P. M.—A little more restless. Pulse 134; respiration 38; subsultus tendinum. Has had one dark green fluid evacuation resembling the matter vomited two days ago. Abdomen softer and less tympanitic, but not less painful. Lochia have almost ceased; tongue becoming dry and brown with disposition to crack. Face very anxious. Lies on her side with knees drawn up.

9th, 11 A. M.—Pulse 120; respiration 58.

7 P.M.—Died. No post mortem allowed.

Remarks.—Although this case has no direct connection with the subject of this article, yet I think that its interest would warrant its introduction into any article on midwifery. But it is published here on account of the interesting parallelism between the results of the same manipulation for reducing the prolapsed funis; and because I desire to say that notwithstanding the failure of the manœuvre proposed by Dr. Thomas in these two cases, I am convinced that by its aid we can better, and more readily, retain the funis in utero than by any other means with which I am familiar, and we are always well entitled to hope that the funis may slip behind some presenting part sufficiently large to retain it, and thus be restored to its original and natural position in the majority of cases. I shall certainly employ it hereafter whenever the condition of facts is such as to prevent me from delivering with great rapidity, either manually or with forceps. But from these two cases we can see that the position proposed and careful reposition of the funis, are not of themselves sufficient to prevent the funis being driven up hill by uterine contraction, unless sheltered by a presenting part of sufficient volume.

Case 21.—*Deformed pelvis—Breech presentation—Perforator—Convulsions—Recovery.*

Remarks.—This, like the complicated case of labor that I saw with Dr. Trenor, has no bearing on the forceps presented, but serves as an additional example of the growing frequency of the pelvic deformities imported into this country by the lowest of our foreign population. Things have changed greatly since the days of Dewees. A graduate of Bellevue Hospital now runs a fair chance of seeing as many deformed pelves during his eighteen months connection with the Hospital as that distinguished man acknowledges to have met with during his career; and thus the practice of obstetrics is being modified by this among other causes.

Mrs.——, a primipara, aged 25, short in stature, but with no apparent deformity, came to full term, and fell in labor on the night of the 12th under the care of my friend, Dr. H. S. Hewit. At 11 P. M. the membranes had ruptured and the waters escaped. Fœtal heart beating; breech presentation recognized; pains slight. Sent for me 9 A. M., 13th. Found os fully dilatable; sacrum of child directed to left sacro-iliac synchondrosis. Fœtal heart very audible, with summum of intensity above and to left of umbilicus; maternal passages and pulse good. Pains had been strengthened by ergot. Recognized general pelvic deformity; pubic arch good, but rami of ischia too close. Entire brim under size with apparently $2\frac{3}{4}$ of antero posterior diameter and promontory sharp.

The pains continued good all day, as did the fœtal heart and the mother's condition. The child's scrotum was distended and forced down. Its sphincter ani contracted around the finger.

In the evening, after watching the patient for twelve hours, I advised an operation, and stated that the difficulty would be so great that I should require another assistant, as Dr. Hewit was to take charge of the chloroform. Dr. Metcalfe then became associated with us, and I proceeded with a blunt hook to bring down both thighs, and then both arms, which was accomplished without fracture. The head came to the brim with the chin to the left ilium, and no manual efforts were of any avail; nor was there any space for forceps. I then introduced the blunt hook into the mouth, the child being dead, and pressing the crotchet against the occiput, worked till I fractured the jaw at the junction of the left ascending ramus, without any effect. Then introduced the perforator behind the mastoid process of the right side, and made ineffectual efforts with the crotchet. At this stage, there was room for one blade of the cephalotribe in front of the left sacro-iliac synchondrosis, and I introduced it in the hope that some lucky move would make room for the other; but it was impossible. Accordingly I re-introduced the perforator and crotchet, and pulled till I was temporarily used up, though the head had now begun to descend. Dr. Metcalfe succeeded me, and with strong effort withdrew the head. Placenta followed immediately, and uterus contracted well. No hemorrhage. Some symptoms of metritis, which subsequently presented themselves, yielded to a blister dressed with mercurial ointment, and the exhibition of morphia and the veratrum viride.

The patient had convulsions of a mild character on the following Tuesday night, in which the tongue was not bitten; and again on Wednesday night, Dr. Hewit being summoned suddenly to her, witnessed a recurrence of the phenomena apparently from fright. Urine drawn with the catheter, and examined by Dr. Gouley, gave evidence of a slight amount of albumen with casts of the uriniferous tubes, and blood corpuscles.

26th.—Has done well. Premature labor advised hereafter.

Case 22.—Contraction of antero-posterior diameter of brim —Forceps—Version—Perforator.—This was a case, to which Dr. McLeod, the present resident physician of the Lying-in Asylum, was called in consultation, Dr. Powers being in attendance. Dr. McLeod being now (Aug. 9th) out of town, I cannot present all the points of the case, nor its subsequent result.

The deformity was such, that the finger readily enough reached the promontory, when passed along the plane, extending to the lower part of the pubis. Her first child had been force-delivered, still-born; she was now at term; and after a tedious labor, Dr. McLeod had applied forceps, the head not being engaged within the brim, and had failed to advance it. He then performed version, a difficult task in this case, with a large male child to contend with, and had brought away the trunk without injury, but could not advance the head by any traction. Failing entirely with the hand, and the child being dead, with the chin to the right ilium, he introduced the crotchet in the right orbit, and made strong traction, until the orbit and malar bone yielded before the instrument to the alveolar process. He then requested me to see the case. She was under the influence of chloroform, administered by Dr. Powers. The woman's condition was good, and I tried manual efforts, as I often have in these cases, until I have felt and heard the bones of the neck crack, and without avail. With the permission of the gentlemen, I applied my forceps, and hung on it awhile to no purpose. In this case the blades could be readily introduced; so capricious are these cases, some of the diversities of which are illustrated in this article; and there being nothing left in the right orbit to pull on, I proceeded to introduce the perforator, designed by M. le Dr. Blot, of Paris, which I like better than any perforator which I ever used. My reason for not using it at once, was chiefly the position of the head. It was so high up, and so locked, that there remained but the choice of two places for perforation. One through the mouth, with the risk of its slipping through the hole made by the crotchet, and the other through the occipital bone, between the protuberance and the mastoid process, and here the entrance of the point could not be guarded, and the axes of the head had to serve as guides. Having opened the head and evacuated the brain, Churchill's crotchet did the rest, the base of the occipital bone giving a capital purchase in these cases.

Chloroform.—Perhaps it will be as well to mention here, in reference to chloroform, that I always use it in private midwifery practice when desired, and always offer its advantages; and have never performed but one midwifery operation without it, and then in deference to the wishes of a senior physician; and that neither in these cases, nor in the very numerous ones in which I have given it for my surgical friends, in the severest operations, have I ever had cause for regret or alarm. On one occasion, there was a little boy at the Asylum, thirteen days old, with a congenital oblique inguinal hernia, which had been always reducible, and was now so no longer. Failing with the taxis, I requested Dr. John C. Cheesman to see it, and he manipulated the parts carefully, and without success. I then proposed to give chloroform. He stated his preferences for ether, but allowed me to do as I chose. Having brought the child under chloroform, I held him up by the heels, when Dr. Cheesman reduced the hernia instantly. In the afternoon, on my way back from the truss maker's, I met Dr. Murray, of the army, told him of the case, and asked him to visit it with me. We found the hernia down, and not caring to try too much taxis under the circumstances, I gave chloroform again, and with the same result. Radical cure was then effected with the truss. This must have been nearly five years ago.

Case 23.—Before closing this article, which has spun itself out to an inordinate length, I would like to mention a case, happening some two years since, which now occurs to me, illustrative of the second point made, regarding the application of the forceps. Unfortunately the notes are not in my possession, but it becoming, in the opinion of Dr. I. E. Taylor and myself, desirable to deliver a woman in Bellevue, in whom the child's head floated above the pelvic brim, I proceeded to turn in the presence of Dr. Taylor, and the house staff. Of those present, I remember at this moment Drs. John C. Draper and Bolling A. Pope. Having introduced my left hand entirely above the pelvic brim, I found that the wrist accidentally steadied the head by pressure on the chin. Calling for Dr. Simpson's forceps, without removing my hand, I delivered a living child. Mother did well.

43 West 32d street.

Art II.—*On the Changes of Blood-cells in the Spleen.* (An Abstract of an Inaugural Thesis.) By Henry Draper, M.D., of New York.

The researches of Mr. Gray, Professor Kölliker, Dr. Sanders, and others, show that the spleen consists of an exterior fibro-muscular coat, from the internal surface of which bands project in every direction. The divisions to which these bands give rise, are filled by—1st, splenic corpuscles; 2d, parenchyma; 3d, blood-vessels and lymphatics.

The splenic or malpighian corpuscles are made up exteriorly of a prolongation of the sheath of their artery (for they are arranged upon the artery like grapes upon a stalk), containing, 1st, very minute cells, with nuclei; 2d, free nuclei; 3d, according to Dr. Sanders, bright golden-colored cells; 4th, an intercellular plasma; and 5th, the arterial twig.

The parenchyma consists, in a great measure, of the same minute cells imbedded in a plasma; but here and there, interspersed, are: 1st, large cells like blood-cells; 2d, small cells, consisting of granular matter; and 3d, aggregations of decaying blood-cells.

The arteries of the spleen break up into small branches, which, passing through the malpighian corpuscles, become capillaries as they reach the parenchyma, where, of course, the veins originate.

The spleen is thus seen to present a very considerable analogy to the sugar-making portion of the liver. There are, in both cases, arteries breaking up into small twigs, ramifying through and on the surface of masses of cells, changes occurring in the contained blood by the contact of those cells, and the products are conveyed away by the veins, so that if the spleen has no duct, this fact by no means condemns it to be called merely a reservoir.

The views in regard to the functions of this organ have been very various. Dr. Funke, who experimented on horses, came to the conclusion, that in the splenic vein; 1st, the blood had a much larger proportion of white or colorless corpuscles; 2d, that the red cells differed from those of other blood, in their mode of aggregation; 3d, he thought that he perceived the white changing into the red; 4th, that there are always some cells with three or four nuclei; 5th, that there are large round or oblong granular bodies of various sizes; 6th, that there are occasionally crystals, apparently formed from the blood-cells.

Professor Kölliker supposes that the spleen destroys the cell-wall, and changes its hæmatin into the coloring matter of bile.

Hewson maintained that the spleen was the birth-place of young cells, and his views have been supported by Professor Bennett, who showed that in cases of over proportion of the colorless corpuscles, from which the red cells arise, there was hypertrophy of some one of the ductless glands.

Hence it may be seen that on one side are arrayed Funke, Hewson, and Bennett, who believe the spleen to be a generator of blood-cells; and on the other, Kölliker, who believes it to be a destroyer of them.

Besides these authors, many others have written, some on one side, some on the other, but still with the same contradictory result.

The present series of experiments was undertaken to clear up some of these doubts. There is brought into the field a most powerful aid to microscopic inquiry, photography, an aid which cannot be too highly appreciated, since it frees us from the necessity of having to depend on treacherous recollections of former objects, and enables us to compare the sun's transcripts, one with another, side by side, and demonstrate variations, which otherwise would never have been noticed.

The animal chosen was the frog (*Rana esculenta*). He is readily accessible, and the various kinds of blood can be obtained without much trouble, by a careful dissection. His great advantage is the large size of his blood-cells, rendering it comparatively easy to see the changes occurring in them. The blood was photographed dry; 1st, because from the result of several experiments, it did not seem to make any change either in the form, or arrangement of the cells; and 2d, to avoid the complications incident on the use of suspensory solutions.

The plan of procedure was, to take a frog and submit him to the operation of water at 150° Fahr. This produces a species of tetanus, suitable for the dissector's purpose, for all visible motion, except that of the heart, ceases. Then the animal being stretched on a board and secured, a longitudinal incision was made at one side of the median line, to avoid the large vessels which lie in that line. The incision being carried through the abdominal walls, the intestines were carefully drawn out, and with them the spleen. A piece of white cardboard was then introduced underneath, in order to show plainly the course of the vessels.

Up to this time it was not necessary to lose more than a single drop of blood in the dissection. The vessels being then plainly seen, the peritoneum was cut away so that the spleen was retained in place only by them. The artery being discerned, was seized by a pair of forceps, and cut on the side nearest the heart, then immediately after the veins were severed, and the spleen being put on a slip of glass, a drop of blood was allowed to spread itself thereon, the artery having all the while been retained closed. These drops were dried in the open air, and were submitted to a power of about 250 diameters, and photographed on glass. From those pictures on glass, the paper-proofs illustrating the thesis, were taken.

For the investigation of the functions of a gland, there is, of course, no plan so sure to be successful as an examination of the change it has induced in the fluid passing through it, and substantiating such an examination by an analysis of the produced secretion or excretion.

In this gland, however, where no duct exists, and where the guidance of the secretion is lost, we are necessitated to examine the passing blood with double care, and noting its changes, draw from them the requisite information.

The essential object, then, of these experiments, was to procure blood-cells from the splenic artery, or other general systemic source, and also from the splenic vein. The blood from the artery or system generally represented, of course, blood as yet unchanged by the spleen, and that from the vein, blood at a maximum of change, having just passed through that gland. A number of photographs of each kind were then taken, and one set compared with the other in various ways, and their differences noted. A choice was made at random from the tables of differences thus produced, and the conclusions at the end of this paper were drawn.

At first, attention had to be directed to the relative anatomy of the splenic vessels of the frog. Injections of the arteries of his abdominal viscera are very difficult to make, because, as the vessels are small, a fine injection must be used, and the capillaries on the intestinal walls are so large, that before all the arteries are full, some of the veins will be pretty well injected, and a dissection subsequent to the injection would be very deceptive. The only plan suitable under these circumstances, is after having drawn out the intestines and exposed the spleen on cardboard, to inject and carefully observe how the vessels are filled. Of course, if in several cases one of those going to the spleen fills immediately, and the rest after some time begin gradually to be colored, from the intestine, toward the spleen, it is justifiable to say that the first filled is the artery and the others the veins.

The next point was to secure specimens from various frogs, and having dried, to label them.

The operation which succeeded, namely, photographing the microscopic image, was by far the most difficult to perform successfully. It consisted of managing the microscope, of photographing the image on glass, and of transferring it by chloride of silver to paper. The method of illumination, and the focusing of the microscope, are only to be obtained by experience. In fact, these and the photography, have left me but a small part of three summers. The difficulties of photography can only be known to those who have attempted it. A good negative is for long and long

"Rara avis in terris, nigroque simillima cygno"

to the amateur.

There will be presented in this paper results from the blood of the splenic veins of four different frogs, of the splenic artery of one, of the amputated legs of two, and of the vena cava of another batrachian, the toad; the four last being taken as general systemic blood.

In a printed abstract, it is of course well-nigh impossible to introduce photographs for illustration, as was done in the original Thesis, now deposited in the Archives of the University Medical College. And woodcuts executed from those pictures would be worth nothing, for the value of photographs turns on the fact that they are produced (it might be said) without the intervention of human art, and are copies of microscopic images executed by the sun, not having passed through the draughtsman's and the engraver's hands, each of whom introduces in his work necessarily some inaccuracies, which are fatal to the comparative trial that these cuts would have to endure.

We must therefore content ourselves with simply producing, and examining the tables deduced from those photographs, referring any one who takes an interest in the matter to the originals.

In the blood of the splenic vein, of 100 cells, 85 were distorted and broken, while only 14 were perfect. *The perfect were therefore to the imperfect, as* 1 *to* 6. *In the blood of the amputated leg*, which is a fair representative of general systemic blood, of 140 cells, 68 were perfect, and 67 distorted and broken. *The perfect were to the imperfect, as* 1 *to* 1. And what renders it more striking, is that of all the specimens of general blood that will be introduced, this one has the largest proportion of imperfect cells.

In the following table, from which the above facts were drawn, the cells called perfect are those which are of an elliptical shape, and whose nucleus is central.

TABLE I.

	Where from.	Perfect.	Distorted and broken.	Total.	Perfect to Imperfect.
Fig. 4,...	Splenic Vein,...	14	85	100	1 to 6
Fig. 5,...	Amputated Leg,	68	67	140	1 to 1

It will be observed that the column marked Total, does not correspond with the total of the two columns marked Perfect, and Distorted and broken. This is owing to the fact, that the three columns are produced by three separate countings from the photograph, and not by a process of addition and subtraction, as tables often are. The deficit consists of cells so nearly perfect, that in counting they are passed over as being neither perfect, nor imperfect.

The photograph corresponding to Fig. 4 contains besides two other interesting objects. The first is one of those bodies known as blood-corpuscle-holding-cells, and consists of a sac whose section is about four times the size of that of an ordinary blood-cell, and which seems to contain in its substance four nuclei, each with a semi-developed, or half disintegrated cell-wall. It is the only one that has come under my notice at any time.

The second object of interest is a blood-cell which apparently incloses a crystal, but upon a very careful examination of the original preparation at different foci, this was demonstrated to be merely an optical deception, produced by a wrinkle in the cell-wall.

No note is taken of chyle corpuscles and free nuclei. There seems to be, as a general rule, from four to ten per cent. of them, in all the kinds of blood that have been used for specimens in this thesis.

Before going further, it is well to create a standard of the perfect and imperfect cells in general systemic blood. By deductions from the following table, we shall show that, *of every 5 cells of systemic blood*, 2 *are imperfect, and* 3 *perfect.*

This proportion seems extremely high for the distorted and broken cells. By leaving out Figure 5, we could lower it to 4 in 13, but it is better to allow it to remain, high as it is; for although the imperfect may be, and probably are, considerably less in number, still, if we can establish the fact that average splenic blood (venous) contains a greater number of imperfect cells than this, such a difference will be all the more striking, when the average systemic proportion is lowered.

The results that are now introduced are from pictures of blood procured from the amputated legs of another frog, from the splenic artery, and from the vena cava of an analogous batrachian, the toad.

TABLE II.

	Where from.	Perfect.	Distorted and broken.	Total.	Perfect to Imperfect.
Fig. 5,	Amputated Leg . .	68	67	140	1 to 1
Fig. 6,	Amputated Leg . .	73	56	137	4 to 3
Fig. 7,	Splenic Artery . . .	86	39	126	2 to 1
Fig. 8,	Toad's Vena Cava	68	5	73	13 to 1
	Total	295	167	476	3 to 2

We shall now examine tables from several specimens of splenic venous blood, and from them shall demonstrate that, *of every* 6 *cells from the splenic vein*, 5 *are imperfect.*

The reason that so large a number as nine figures are used, is because it is much more important to get a fair average proportion than in the former case: for any one can see systemic frog blood; not so with that from the splenic vein.

TABLE III.

	Perfect.	Distorted and broken.	Total.	Perfect to Imperfect.
Fig. 4, ...	14	85	100	1 to 6
Fig. 9, ...	15	82	97	1 to 5½
Fig. 10, ...	17	101	120	1 to 6
Fig. 11, ...	3	50	53	1 to 16
Fig. 12, ...	10	67	81	1 to 6½
Fig. 13, ...	13	103	120	1 to 8
Fig. 14, ...	24	102	127	1 to 4
Fig. 15, ...	23	74	97	1 to 3
Fig. 16, ...	30	75	110	1 to 2½
Total, ...	149	739		1 to 5

The photograph corresponding to Fig. 10 shows, as well as can be, all the characteristics of splenic venous blood. There are in it perfect cells, swollen cells, stretched cells, cells with a piece broken out, cells with a part of their contents removed, empty cells of a chlorotic appearance, broken cells with the nuclei near the edge, relics of cell-walls, free nuclei. *Is the spleen creating or destroying?*

Comparing now the results of Table II. with those of Table III., we see that, in the former, of every 5 cells, 2 were imperfect, and in the latter, of every 6 cells, 5 were imperfect. Reducing to a percentage, we find of imperfect cells—in the systemic blood, 40 per cent.; in splenic vein blood, 83 per cent.

The conclusion then is plain. The number of imperfect cells in splenic vein blood is double the general systemic average.

We may also, by a careful examination, perceive that the progress of destruction is first a tendency to loss of form, then a decrease of the power of impeding light, caused either by change of color or diminution of the contained fluid, then a rupture of the cell-wall, either from swelling or from some chemical change in it, finally the escape of the nucleus, and complete solution of the cell-wall. Not that this is always the case, for many cells seem to break down at once.

But let the change be what it may, it can only be partially accomplished in the spleen, else how is it that we see so many coming out distorted and decaying?

The most natural conclusion is, that blood-cells coming here, after having made the tour of the circulation several times, have such a change wrought, either in themselves, directly or indirectly, by means of the plasma which contains them, that their walls become no longer capable of resisting the weak mechanical forces to which they are subjected. Perhaps the fibrinous wall changes like the fibrin of muscles, and becomes inosite and creatine; the inosite passing on to complete oxidation in the lungs with its kindred liver sugar, or becoming liver sugar. As for the rest of the cell, the fat of the nucleus becomes liver fat, or bile fat, or liver sugar, the hematin colors the bile, and the globulin becomes casein, or some analogous body.

Some of those cells which have passed apparently safely through, may perhaps carry the elements of change impressed upon them, and in this way we might account for the distortions in general blood.

That such an action as I have described may take place in the cell-wall in passing through the spleen, is easy to believe from a very casual view of the structure of that organ.

Finally, the great conclusion arrived at is, that as it is proved that the splenic vein blood contains at least double the general average of imperfect cells,

The Spleen must be an organ for the disintegration of blood-cells.

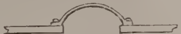
Art. III.—*Remarks on the Treatment of Fractures of the Thigh, with a new Apparatus.* With report of cases (continued from page 330, vol. ii., 3d Series). By J. H. Hobart Burge, M.D., Surgeon to Brooklyn Central Dispensary, late Surgeon to the New York Dispensary, etc.

In my last communication, on this subject, I described an apparatus devised by my brother and myself, for the treatment of fractures of the thigh which, in our opinion, and that of many others, who had seen it, was better calculated to answer all the indications which arise in the management of these grave cases than any other appliance in use. In reviewing what was then written, I am gratified that my enthusiasm did not lead me to over-estimate the work of my own hands, and that I made no promises which have not been more than realized, and set up no claims which have not been substantiated. It is, of course, gratifying to us to hear but one opinion as to the excellence of our apparatus; but it is doubly pleasing to be assured that we have left to others to discover in it possibilities of good, some of which we did not at all foresee, and others of which, though hoped for and expected, we were conservative enough not to promise, but to leave to the decision of experience.

After detailing one of the cases given below, Dr. C. L. Hubbell, Attending Surgeon to the Troy Hospital, writes as follows: "As to the general plan, scope, and claims of your apparatus, I most heartily say, it is all you represented it to be. Our patient did not complain at any time of the counter-extending pressure upon the tuberosities of the ischia, although a good degree of extension was kept up most of the time. Indeed, he was more comfortable when it was kept up, particularly in the first week or two of his confinement, and *complained* when it was let up. I have always used for fractured thigh, what is known in the N. Y. Hospital as Buck's modification of Desault's long, straight splint—latterly with the aid of adhesive straps, and although having no reason to complain, on account of shortening or any other bad result, yet I should much prefer your apparatus, for the simple reason, that just as good a result can be effected with infinitely more comfort to the patient, and less trouble to attendants and nurses. In addition, I would suggest to you the propriety of recommending your apparatus in the treatment of fractures of the pelvis. It seems to me, nothing better could be devised (of course dispensing with that part of it below the cross-bar) to procure firm and equable support; to avoid motion of the fractured bones, and thus retain them in perfect apposition. The most perfect support would be given to the innominata, by the aid of properly arranged compresses, laterally, and in cases of fracture of the ramus of the ischium, or of the pubis above, near the symphysis, the counter-extending straps of a broader shape, well padded, could be used to great advantage. And, what is usually the most difficult thing to avoid, viz.: defecation, without pain to the patient, or great trouble to attendants, would be entirely avoided by the provision so happily secured for that purpose in your apparatus."

Other surgeons have observed its applicability to cases of incipient hip-disease, making just extension enough to take off the pressure from the inflamed surfaces, keeping the parts perfectly at rest, and affording ample facility for the use of any form of counter irritation. Several of the most practical surgeons among us have spoken favorably of this view, and though no case has yet been treated, the operation is so simple, that one could not be disappointed in the effect in any given case. Of course, for such treatment, the cases must be selected—one plan will not do for all.

Another feature of this apparatus, never before published, is the liberty it affords the patient of sitting up, during the whole course of treatment. This was enjoyed even in the three cases published a year ago, yet we suppressed all mention of it. We did speak of the entire freedom from restraint of the whole upper part of the body; but we did not dare promise that patients might sit up every day. It was hardly to be expected that such a luxury could safely be granted to a man with fracture of the longest bone in the body. Yet time and experience have demonstrated that in nearly all cases patients may sit up as much as they please, not only without detriment to the reparative process, but with absolute advantage. The limb being already extended to its normal length, and properly supported by the splints of coaptation, and the pelvis nicely kept from lateral or other displacement, when the patient assumes the sitting posture, the ossa innominata roll easily upon the heads of the femurs, and what little muscular motion there may be in the confined limb, seems rather to mould the fragments more perfectly into place than to exercise any disturbing influence. We have met with exceptional cases, when the fracture was at or near the cervix, in which the patient had no desire to sit up.

Again, this apparatus is as useful in compound as in simple fracture, and when the wound is extensive, and upon the outer aspect of the limb, all the modification necessary is to saw out a piece of the long splint, and reconnect the remaining parts with an arch of iron thus:  leaving the wound perfectly accessible.

Again, the bed-pan arrangement proves of such utility that, substituting a short splint for the long one, we now use the apparatus in many cases, where no extension is required, and, indeed, where no fracture exists—simply as an invalid bed. In this way it is particularly valuable in all cases where absolute rest is desired for either or for both of the lower extremities. Formerly we used as thick a mattress at the foot as at the head of the bed, and introduced the bed-pan, through an opening formed by withdrawing a section of the mattress. We now use a thin mattress under the limbs, spread upon a wooden platform. This platform is of equal height with the cushioned platform, which constitutes the central part of the apparatus, and is made with hinges so as to fold, for convenience of packing. By this slight modification we have gained much. The bed-pan may now be passed under the platform from either side, and more equable support is given to the injured limb. The long splint is also made in two pieces, and may be lengthened or shortened at will. The arch of iron connected with the long splint, and the supporting rod running from this to the cross-bar, were devised when we used the thick mattress beneath the limbs. Then some special support to the injured limb was very necessary, and although this necessity is in a great measure superseded by the uniform support afforded by the wooden platform and thin mattress, which we now use, the utility of this extra appliance is often apparent in preserving the parallelism of the inner and outer splints, and keeping the whole limb in a more comfortable position, and also in preserving more perfectly the arched form of the femur; for let it be observed, the bandages which are tied over the rod, may pass round the limb either externally or internally to all the splints, or both externally and internally.

Dr. John Watson, of the New York Hospital, observing that the perineal strap of one side sustained nearly, and at times, all the counter-extending pressure, remarked that we complicated the apparatus by using two. Here I may observe, that if the patient were always in the recumbent position, the second pad might be dispensed with (though even then I cannot concede, that it would be entirely useless); but when the erect posture is taken, the extra pad becomes important, both for the comfort of the patient and to keep the bilateral axis of the pelvis as nearly as possible at right angles with the shaft of the femur.

It will be readily seen that the essential counter-extending pad is the one on the side corresponding to the fracture. This, of course, should never be slackened except by the surgeon; and if the patient or his friends show a meddlesome disposition, a small padlock will perfectly secure the strap. The pad upon the other side may however be slackened, or removed and replaced by the nurse, ad libitum.

We are far from desiring for this apparatus a place which it does not merit; and therefore we still invite, as we have ever done, the criticisms and comments of surgeons. I have heard a theoretical objection suggested which I will notice. It is that the firmness of the central cushion might cause sores over the sacrum; to which we answer, that we and others have treated cases ranging from nine to seventy-six years of age, and no such difficulty has ever threatened, nor is this surprising when we recollect that the pelvis, though fully secured against all injurious motion or displacement, is not however so confined as to prevent the patient from relieving an irksome position. The side splints make no pressure against the hips, but are merely in apposition thereto, and firmly fixed. The patient does not feel that he is much confined. Moreover, he can lie perfectly flat, or he can allow his shoulders to fall below the level of his hips (thus at the same time lessening the pressure of the perineal straps, and slightly elongating the limb), or he can have his pillow high, or, as already mentioned, he can sit erect—a happiness never before granted to a patient with fractured thigh, unless all hope of ossific union were given up. It is therefore easy to see why no injurious or painful pressure comes upon any part; and while all this liberty is given to the patient, we can affirm, not only that the union of the bone is not prevented or retarded, but that it is in a great degree promoted, inasmuch as cæteris paribus, every thing which conduces to health and comfort, must have this tendency.

There is not, and cannot be, any apparatus which will obviate the necessity of watchfulness and skill on the part of the attending surgeon. Nothing can supply the place of good judgment. All the aids and appliances in the world are nothing to the surgeon without this. It is utterly impossible to express by words, written or spoken, just how tight bandages should be applied, how early or how forcibly the limb should be extended, how often dressings should be re-adjusted, in what cases it is best to use a posterior splint and in which to omit it. These, and a thousand other points, are necessarily left to the judgment and skill of the attending surgeon, and upon them depends his responsibility, his reputation, and the welfare of his patient.

Case 4.—Daughter of Rev. Dr. ——; aged 9 years; of very feeble constitution. Had sustained several fractures previously. Has congenital malformation of both legs, giving the appearance of an anchylosed knee about four inches below the natural joint, and presenting an angle of 90° with the vertex in front.

Nov. 7th, 1857.—Fell heavily upon the floor while running, and fractured the left femur just above the middle. I was called to this case by my friend, Dr. Mulhallon, of this city. Crepitus distinct; considerable displacement. I placed the limb over a pillow, and directed evaporating lotion. On the third day applied our apparatus. Owing to the deformity, the adhesive plaster could only extend from the point of fracture to the angle above mentioned; yet it worked well, and the result was, after six weeks, perfect union and a better parallelism between the two limbs than had before existed. Of course, no inferences could be drawn from this case, in reference to the effect of treatment upon the length of the limb, the other thigh and both legs having been before fractured. Yet this case is valuable as showing the applicability of the apparatus to cases in young children—particularly in connection with the fact, that she was allowed to exercise all the freedom of motion of which she was capable—the only precaution being to present her playthings to her as often from one side of the bed as the other, to prevent any continued inclination of the pelvis to the right or left.

Case 5.—Chief Justice ——, 76 years of age; treated by Dr. Hoffman, a surgeon of eminence in the city of New York.—This case is one of interest from every point of view; but especially, as literary old gentlemen, of nervous temperament, are always hard subjects for any sort of restraint.

The fracture was somewhat above the junction of the middle and upper thirds, was very oblique, and the fragments much displaced. The injury was caused by slipping down a flight of stone steps; the limb was much contused, and shortened two inches and a half. Our apparatus was applied on the 9th day. The swelling was still great, and ecchymosis extensive. The limb was gradually brought down as nearly to its normal length as seemed compatible with comfort and safety. The dressings were re-adjusted two or three times in the course of six weeks; at the end of which time (seven weeks and two days from the accident) it was found firm union had taken place with shortening of only one inch, and no deformity. The Judge was as comfortable during the whole course of treatment as one in his feeble state could possibly be; and when removed from the apparatus to an ordinary bed, he found the change so unpleasant that his surgeon had him replaced upon the fracture-bed at his own request. Various causes, not essential to this report, combined to prevent the patient's walking for several weeks after the bone united. He finally moved about, and used his limbs very well.

Case 6.—Fracture within the capsular ligament. Patient about fifty years of age; suffering at the same time with a fracture of the radius and ulna, and also, during his confinement, had an attack of pneumonia. This case was treated at the Troy Hospital. Dr. C. L. Hubbell, attending surgeon, says: "I did not expect to get union, but thought, nevertheless, I would try the new apparatus. No union took place, but the patient is able to walk about with one cane, and his locomotion is as good or better than that of any one I have ever seen who sustained that fracture. I think the chances of getting union in these fractures would be much greater with the use of your apparatus than with any other, on account of the advantage gained by giving firm and comfortable support to the femur at its middle by the suspensory arrangement; thus avoiding the dragging downwards and backwards of the limb, which must necessarily take place without it, although extension in any form were adopted at the same time."

Again, he says: "We shall be glad to make use of your apparatus whenever opportunity offers, and recommend it to all who treat fracture of the thigh or pelvis."

Case 7.—Of this case I have not a full record. It was treated in the hospital at Buffalo. Dr. F. H. Hamilton, whose words are always cautious, writes as follows: "I can only say, in brief, I have used your apparatus once, and with all the success which I shall ever expect from any apparatus when used in a similar case. The patient was an adult, a laboring man, and the thigh is shortened half an inch. It is not apparent in his walk; can only be detected by a careful examination with a tape line."

The doctor then proceeds to say: "This same result I have obtained in other cases, and with other apparatus." And again: "With children, however, I have frequently obtained union, without any appreciable shortening." Again, speaking of our apparatus, he says: "I have before said to you that I admire its construction, and that I am satisfied that it possesses many excellences which will make it a very useful instrument. I am not yet prepared to say that it is the best in use. Of this I am not certain. Yet no doubt it is among the best; and it would not surprise me if experience should show that it were the *best*."

Prof. H. is the highest authority in this country upon the subject of fractures and dislocations, and I have quoted his expressions in full, in order to show that I have no disposition to overrate our method of treating fractures of the thigh. It is proper here to remark, that we sent an apparatus to Dr. H. before we made the last improvement, but we hope to furnish him with one, presently, in its perfection.

Case 8.—Miss ——, aged 40, of feeble constitution, had curvature of the spine when a young girl. In February last made a misstep and fell from a chair upon a stone hearth, fracturing the left femur obliquely at the junction of the middle and upper thirds. Dr. Harcourt, of Staten Island, took charge of the case, and called me to see it with him. We applied our apparatus on the fifth day. The patient prophesied that it would be a "long case," if it ever got well, for she judged from the experience of the family—her brother having sustained a fracture of one leg in the early part of last year, and getting firm union only after seven or eight months. Before the apparatus was applied, the limb was two inches shortened. It was gradually extended to full length, and retaining perfectly the normal position, was not redressed till six weeks had elapsed, during which time she continued very comfortable. Upon examination, the union was found to be only ligamentous. Apparatus re-applied. Limb examined from time to time. Union becoming more and more firm till the fourteenth week, when, supposing we had effected all that we could by extension, we removed the patient to an ordinary bed, and applied a splint made of pasteboard. After one week it was found the limb had retracted an inch, and the patient finding her new quarters by no means as comfortable or convenient as the old, she was replaced upon the fracture bed, where she still remains (August 1st), sitting up daily. Her health has never been good. Has suffered considerably from costiveness, leucorrhœa, and menorrhagia. The union of the fracture seems to become more and more ossific, though she is not yet able to raise the limb from the bed. The phosphate of iron was prescribed, and afterwards the compound syr. of phosphates, but her system does not tolerate anything of the kind. Dubious as this case seems, when we consider the precedent established by a similar case in the same family, and the fact that the union, though slowly, has steadily increased in firmness, we are not without hope of a useful limb. May we not reasonably question whether, in a less retentive and less comfortable appliance, union would have taken place at all?

Case 9.—Miss ——, aged 13. Nervous and sensitive in a marked degree. While at play, fell over the balustrade, a distance of twenty-five feet, striking upon a hall table, and then upon the floor. She was taken up insensible, and continued so for many hours. When the effects of the concussion passed away, the only fracture was found to be at the cervix femoris of the left side. Dr. Willard Parker, of New York, took charge of the case. He used the straight splint (Physick's Desault). The counter extending pad, though used with all the caution and judgment for which Prof. Parker is so justly celebrated, was badly borne; causing excoriation and pain. Somewhat more than three months elapsed, and no union took place; whereupon he recommended a trial of our apparatus, and being himself much engaged elsewhere, requested me to take charge of the case. I did so; Dr. P. making an occasional visit to observe its progress. Our apparatus was first applied on the 11th of March, thirteen weeks after the accident. During the seven weeks next succeeding, the patient was perfectly comfortable, except that she complained slightly of the counter extending pressure upon the perineum, which was rendered morbidly sensitive by the previous pressure. This prevented so great extension as I should otherwise have made, and at the end of the period mentioned it was found that perfect union had taken place, with a shortening of about an inch and a half. Anchylosis of the hip had taken place, and there was also great immobility of the knee. She now (Jan. 1st) walks without crutch or cane, and is daily improving in her gait.

The next case was treated at the New York Hospital, under the care of Dr. John Watson, attending surgeon, and Drs. Ray and Baylis, house surgeons. There is, perhaps, no institution in the world where fractures are better treated than in this hospital. The following history is taken from the record:

Case 10.—Andrew Badecker; aged 45; Germany; carman; admitted January 12, 1858. (Dr. Watson.)

Patient was loading his cart, when the horse suddenly wheeled round and backed, crowding his right thigh between the tail-board of the cart and an upright wooden pillar, causing a simple and nearly transverse fracture, by direct violence, just above the condyles. Moderate contusion; crepitus distinct; shortening, one and one half inches.

Treatment.—Decubitus: limb on double-inclined plane.

13th.—Slight swelling of knee-joint. No tenderness.

16th.—Shortening two inches.

16th.—Put up this morning in Burge's apparatus.

25th.—Apparatus re-adjusted.

Feb. 22d.—Thigh examined. Union firm; no deformity; no shortening. Patient can raise the limb from the bed. Apparatus re-applied. Patient has sat up in bed while eating, every day since the first three days.

March 1st.—Apparatus removed; limb examined. No shortening; firm union.

March 17th.—Discharged cured.

Case 11.—Was treated in the same ward as the preceding, under the care of the same house-surgeons, while Dr. Halsted was attending surgeon. The following is the Hospital record.

William Smith; aged 30; Ireland; laborer. Admitted March 5, 1858. (Dr. Halsted.) One hour ago, while patient was loading a cart, a keg of white lead, of 2 cwt., rolled off the truck and over his right leg and thigh, causing an oblique fracture of the latter, at junction of middle and lower thirds, the lower fragment projecting inwards. Crepitus and false point of motion. Shortening one and a quarter inches. Not much contusion. General health good.

Treatment.—Placed limb on double-inclined plane.

7th.—Increased swelling. Considerable effusion into the knee-joint. Ordered infus. senna, comp. ℥iv., which operated freely. Ordered lotio. evap. 8th.—Swelling and effusion increased. 13th.—Ordered straight apparatus. Shortening one and a quarter inches. 15th.—Fluctuation and swelling in knee joint increased; has occasional stabbing pain in it. Tenderness on either side of the lig. patellæ. 23d.—Limb examined to-day. Little or no union; shortening one and a half inches. Limb placed in Burge's apparatus, and brought down to normal length. Still some fluctuation in the joint.

April 5th.—Position good. 14th.—Apparatus re-adjusted; fair amount of union; no deformity; shortening three-eighths.

May 1st.—Apparatus removed; firm union; no deformity; no shortening. Slight stiffening of the knee joint; is barely able to raise the heel from the bed. Ordered coaptation splints, and bandages to the limb. 8th.—Raises and moves the limb with ease.

Case 12.—Also at the New York Hospital, in the first surgical division, under the care of Dr. Shrady. (Dr. Halstead attending surgeon.)

Alexander McCrodden; aged 24; Ireland; laborer. Admitted April 19th, 1858. Shortly before admission, while attempting to raise a large piece of flagging, along with some others, it slipped from his grasp and struck him with the other edge, just above the knee, causing a fracture at the junction of lower and middle thirds of the femur. It is very oblique in its character. There was some suspicion of fracture through the condyles, but this was not made out. Considerable swelling; shortening one and a half inches.

Treatment. — Limb placed on double-inclined plane, and evap. lotion employed. 26th.—Had to-day an attack of hemoptysis. Has had cough for some time. On percussion marked dullness was detected under left clavicle; local crepitant *râle;* vocal resonance marked; general condition good; appetite good; sleeps well, etc.

May 6th.—Burge's apparatus applied. Shortening three-fourths of an inch (after extension).

June 5th.—Apparatus taken down and re-adjusted; union quite firm; can lift his leg with ease; no shortening whatever.

June 11th.—Apparatus removed; no shortening; can elevate and rotate the limb with ease. Limb placed on double-inclined plane. 20th.—Up and about, on crutches. 29th.—Discharged cured.

Case 13.—I will report this case in the words of E. Krackowizer, M.D., of New York, who was the attending surgeon: "William Strauss, of 593 Fourth street, New York; between 8 and 9 years old; fell, September 18th, 1857, from a distance of about eight feet, and beside other slight bruises, sustained a simple fracture of the right thigh in its middle. I put him, September 22d, in your apparatus, which answered my expectations in every particular. I never felt so free from anxiety about a good result, in treating a fracture of the thigh, as in this case. The dressing was renewed once on the 13th of October. The apparatus was removed entirely October 27th. The union was firm; the fracture had united without the least shortening. The shape of the limb a couple of months afterwards was as perfect as that of the uninjured limb."

We shall continue these reports from time to time.

BROOKLYN, N.Y., August 1st, 1858.

ART IV.—*Remarks on the Employment of Pessaries, with the Description of a new Instrument.* (With Illustrations.) By E. NOEGGERATH, M.D., of New York.

THE more intractable a disease has proved to treatment, the greater is the number of so-called infallible remedies proposed against it. This is true of prolapsus uteri. Every year, almost from the days of Hippocrates, has enriched our uterine armamentarium, and still the mystery seems to be undissolved. There are two classes of practitioners, one of which being disgusted with the host of mechanical appliances now adopted, and now rejected, has almost entirely abandoned the application of pessaries; while the other treats the slightest deviation with a mechanical support. Though the latter do more harm than the former, neither of them proceed upon correct principles.

As a general rule, it may be stated that the application of pessaries, in cases of partial prolapsus or descensus uteri, is more injurious than beneficial. But as soon as the neck begins to appear externally, or descends even lower, the question arises, whether we shall resort to mechanical means of support or not. The answer depends upon the judgment and education of the attending physician.

As it is not my intention to write an essay on the treatment of prolapsus uteri, I will only mention those circumstances in general outlines, which imperatively demand, and fully justify the use of pessaries.

1. Prolapsus in that portion of society, where it is most commonly met with, viz., in poor women, who have neither means nor time to undergo a complicated course of radical treatment.
2. Prolapsus of a very long standing, where the causes may be removed by careful management, while their effect upon the falling of the womb, resists every other means.
3. Those cases of prolapsus, not unfrequently seen even in otherwise strong and healthy women, where the most thorough examination is unable to detect anything apart from the normal state besides a relaxation of all the apparatus supporting the womb.

In admitting the necessity of using the pessary under the circumstances just mentioned, we exclude entirely from consideration the comparative value of the bloody operations for prolapsus. When we attempt a final solution of the question, whether the average number of subjects operated upon, are permanently benefited by it or not, we are overwhelmed with the most contradictory reports of its value. Moreover, the greater number of practitioners are called upon to treat cases not in the hospitals, but private patients, who claim a right to dispose of themselves just as they choose. And most of them are alarmed at the very sight of a bistoury.

Admitting that a pessary is required in a given case, the important question occurs, what kind is to be chosen? The requisites of a good instrument are as follows: 1. It must retain the womb in or near its natural position. 2. It must neither irritate the womb, nor the vagina. 3. It must not interfere with the patient's moving round, sitting, or the excretion of urine and fæces. 4. It must be composed of a substance which resists the corrosive influence of the secretions from the genitals. 5. It must be constructed so as to be easily introduced, and removed by the patient herself. 6. It must be as cheap as possible.

The different pessaries may be divided into two sections, viz.: those which support the womb directly, and those which support it indirectly, by elevating the vagina. Until late years, only the former class was exclusively applied, as this idea most naturally suggested itself at first sight. They are divided again into the *stalked* and *unstalked*, the former being in use ever since medical science was established. Both are intended to give a direct support to the fallen uterus. Later researches seemed to show that the chief and most natural support of the uterus was presented by the vagina, and in this view surgical operations as well as instruments were invented, and as it seems successfully applied for the cure of prolapsus.

The first man who clearly followed this indication in constructing his pessary, was Professor Kilian, in 1846, and he called it *elytromochlion*, *i. e.* vaginal supporter.

His instrument (see fig. 1) consisted of a thin steel-spring, 4″ long, the points of which ended in wooden buttons, and the whole of it was covered with a thin layer of india-rubber. In introducing the instrument, the ends of it are approximated to each other, as much as is required for its easy introduction into the vagina. This position is represented by the adjoining figure, while it forms a straight line, when at rest. In applying it, it must be elevated in the direction of the lateral diameter of the vagina, while its convex portion is directed towards the anterior wall of the pelvis. The instrument thus bent is gently pushed upwards, so that its points take a position to the right and left side of the uterine neck, as high up as possible in the laquear vaginæ.

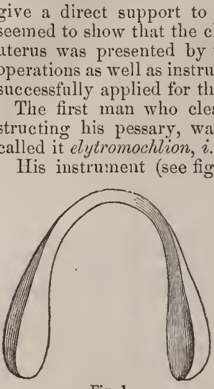


Fig. 1.

The elytromochlion, of Kilian, has been applied successfully in some cases, thus proving that the theory of its construction was based upon sound principles. I have been acquainted with a lady, who wore this instrument with the utmost satisfaction for four years, while every other kind of pessary disagreed with her. Still the instrument has been abandoned by the profession, owing to the fact, that very few women can bear the pressure, which it necessarily must exert, in order to sustain itself in the vagina, while it is easily displaced when the spring is of a weaker tension.

In 1853, Dr. Zwank, of Hamburg, published his new *hysterophor*. It consists of two ovoid thin pieces of metal, covered with india-rubber, or of wood, connected on one end by a joint. In the neighborhood of this joint, on the external surface of the wings, is a metallic pin on each side, two inches long, which can be screwed together at the lower end.

In applying the instrument, the wings are approached as much as possible (fig. 2), and introduced, so that its convex portion is turned towards the os sacrum and pushed upwards, as high as possible, towards the anterior portion of the laquear vaginæ, in front of the cervix uteri. Afterwards, the lower ends of the metallic handles are compressed, and fastened by the screw (see fig. 3). In this position the instrument is retained by itself.

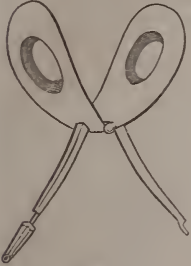


Fig. 2.

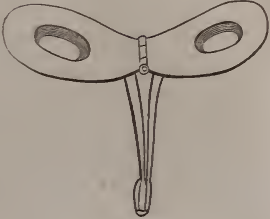


Fig. 3.

About the same time, Dr. Schilling, of Munich, invented quite a similar instrument to that of Zwank; the only difference being that the movement of the wings is effected, and can be regulated by the screw at its lower end.

The purpose of both instruments is to expand the lateral portions, and sustain the superior wall of the vagina, thus preventing its inversion, and, consequently, the dragging down of the uterus.

Dr. Zwank's invention was received enthusiastically by the profession in Germany. Such men as C. Mayer, Chiari, Braun, Scanzoni and Breslau, thought it of sufficient importance to publish their observations in favor of this instrument, and at the present time it has actually supplanted all of its kind.

What is the reason of this? Is it because the profession seized upon the instrument because it was a new invention? Is it because an instrument was wanted? or is it because it proved to fulfill what it claimed? It is not our intention to discuss the question whether the vagina is the principal medium by which the uterus is retained in its position, but one fact is undeniable; viz.: the best method of replacing a prolapsed uterus is to run the fingers upwards along the posterior surface of the ossa pubis. This act is imitated by the introduction of Zwank's hysterophor.

The question which we propose to consider, is whether this instrument has any advantage over those other means, the principle of which consists in supporting the uterus directly. It certainly has; because 1, it is lighter; 2, it touches only a small circumference of the vagina, and scarcely any portion of the womb, thus preventing irritation and ulceration of the vagina, incarceration of the uterus, fluor albus, uneasy feelings; 3, it can be easily introduced and removed, easily brought to its proper place, easily cleaned by the patient herself. This is a combination of advantages, sought for in vain among the host of previously invented pessaries. On the other hand, the hysterophors of Zwank and Schilling have some disadvantages, owing to the substance of which they are composed. The greatest number of them, as now in use, are covered with a coat of vulcanized india-rubber. The discharges of the vagina destroy it in a very short time. After this has been done, the metallic portions begin to rust and decay, thus irritating the vulva; the furrows of the screw at the lower end of the instrument begin to crust, or the screw, if turned too firmly, cannot be untwisted. Some patients have little dexterity, and do not know how to manage the screw at all. An illustration of these facts I am seeing daily, in the case of a lady belonging to the first class of society. She is the widow of a well-known physician of this city, and has suffered from prolapsus uteri ever since her first confinement, many years ago. The most thorough examination is unable to detect anything abnormal about her genital organs, except prolapsus uteri. She has been under the very best treatment of general practitioners and uterine specialists. Everything has been resorted to, to effect a radical cure, and all kinds of pessaries employed, but in vain. At length, one of Zwank's pessaries was suggested. She has worn it now for a year, and is perfectly satisfied; the only drawback being the loss of the india-rubber coating and the rusting of the metallic skeleton.

In order to avoid these inconveniences, Dr. Eulenburg, of Coblenz, modified Dr. Zwank's pessary, and described his instrument in a short thesis, in 1857. It is made entirely of boxwood, and its wings are a little differently shaped, viz.: they are slightly curved downwards at both ends, so that the lower side forms a concave surface. In consequence of this shape, the lateral branches closely adapt themselves to the inner surface of the ramus descendens ossium pubis, thus presenting a kind of hook, which gives a strong hold to the instrument when in the vagina. Both wings move in the centre part by two joints, thus leaving a hole in the middle, through which the secretions of the vagina are allowed to escape. Instead of the screw, Dr. Eulenburg perfected the opening and shutting of the wings, by means of an elastic india-rubber ring, which runs in a channel around the body of the hysterophor, immediately below the two joints.

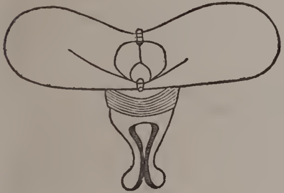


Fig. 4.

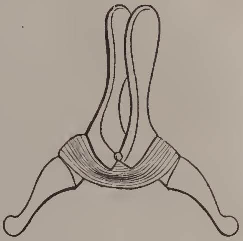


Fig. 5.

By this contrivance, the introduction of the instrument is greatly simplified, and as it shuts on its own account, by the elasticity of the india-rubber ring, its application becomes very easy, thus requiring not the least ingenuity upon the patient's part. (See figs. 4 and 5.) As every particle of metal is avoided (except the small pin, running through the joint), and as the box-wood resists more than any other substance the corrosive influence of the vaginal discharges, it is lighter, will keep longer, and will cause less irritation than the other instruments.

The author found *four* different sizes, fitting to the greatest number of cases, viz.: for the measure from side to side, 2¾″, 3″, 3¼″ and 3½″, and correspondingly the largest antero-posterior diameter of every wing, 1″ 3″, for the two largest sizes, and for the following, 1″ 4‴ and 1″ 5‴.*

The first application of the instrument ought to be performed by the physician himself, who has to choose the size required for every case. His judgment will be conducted by the sensation of the patient, after walking to and fro for awhile, and more so, by the way in which the india-rubber ring contracts. If the extravaginal portion is not shut entirely, the instrument is too large, and has to be removed; if it shuts too quick, a larger one must be chosen. The following duties devolve upon the patient herself, viz.: removing and cleaning it at bed-time, and readjusting it before getting up in the morning. This is performed by seizing the buttons at the lower end, and while separating them from each other, as much as possible, the other end of the instrument is to be gently introduced into the vagina till it cannot go any farther; and (when left alone) now it shuts on its own account. The same way is followed in its extraction. Before its introduction, it ought to be well oiled. In order to render this pessary even more harmless, it is advisable to cover its branches with a kind of glove, made of soft deer-skin, which coat may be moistened with cod-liver oil before every application.

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* Our industrious truss maker, Mr. W. Heynen, of 329 Canal street, has modified the construction of the joint, after my suggestion, so that the pessary can be easily taken in two lateral pieces, thus allowing a more thorough cleansing, while even the small metallic pin of Dr. E.'s pessary is avoided.

In recommending these instruments, and especially the latter one, to the consideration of the profession, I am sustained by the experience of our European brethren who have used them with such general satisfaction, that scarcely any other form is now in use. For my own part, I avoid the use of pessaries as much as possible. But I have had under my care a number of cases, in which a pessary was the only means justifiable. I have tried a great variety of them, and have now come to the conclusion that Zwank's (or Eulenburg's) hysterophor answers better the requisites of a good pessary than any other.

I therefore ask practitioners to give it a fair trial. I do not mean to buy a hysterophor, and sell it to the next woman with prolapsus uteri, but after carefully selecting the case, in which nothing but a good pessary will give sufficient satisfaction, let the different sizes be tested, until the proper instrument is found.

There are philosophers, in our profession, who think it more scientific to abstain from the use of such every day things as pessaries. What do they recommend instead? A so-called radical treatment, or a surgical operation, or a bandage to be applied externally. What is the result? They lose their patients, who losing confidence in their attendant, buy a pessary for the falling of the womb on their own account. I know of several instances where this has happened. I would urge these men to give it an unprejudiced trial, and I am sure they will be satisfied.

101 West 26th street.

Art. V.—*Practical Observations on the Yellow Fever, as it has appeared in Galveston, Texas.* By F. Bacon, M.D.*

All competent evidence bearing upon so vexed a question as the character and relations of yellow fever, is, I trust, acceptable, even though it be merely cumulative and furnish no new facts. It has happened to me to have experience of two severe epidemics of yellow fever, and also to see certain sporadic cases, and numerous cases exported from an infected into a healthy region, and I appear simply as a witness of these facts. There are probably few present who are not at least as familiar as I am with the literature of the subject, so that clearly, if I am to be in any way useful or interesting, I must attempt no elaborate disquisition, but must confine myself to the practical results of my own personal experience.

I may remark at the outset, that if my statements should sometimes seem to conflict with those of many excellent authorities, such discrepancies may be partly explained on the ground of the peculiarities of those epidemics which I have witnessed; and, while I do not discredit the observations of others, I still speak with positiveness of what I have myself seen.

My first acquaintance with yellow fever was during the epidemic which prevailed along the Gulf coasts in 1853, which was acknowledged by all who saw it to be of unusual violence, and to possess some other striking peculiarities. As precisely the same features were exhibited by the epidemic of the following year in the same localities, and, so far as I can learn, by the fever which in 1855 desolated Norfolk and has since menaced more northern cities, they may be considered as characteristic of the present prevailing form of the disease, and will be described in the course of my remarks.

The conflicting statements of various authors having left so rudimental a matter as the regular type of yellow fever a moot question, it may be proper for me to say a few words upon that point, as I have seen it illustrated. It is curious to see the attempts which have been made to force into strict nosological bounds these great epidemics of yellow fever which have had so vast a range of time and space. The perplexed student is tempted to give up nosology in despair, when he finds different authorities classifying ostensibly the same fever as *causus*, as *typhus*, as *febris continua* and as *febris remittens*, to say nothing of minor differences and subdivisions. But we must consider that in these matters, essential unity is not necessarily uniformity; and it is noticeable that the nosologists have generally received their notions of yellow fever at second-hand. In spite of seeming discrepancies of classification, I doubt not that this fever, whenever and wherever we meet with it, from its earliest appearance in medical literature down to the present time, in the towns of peninsular Europe, on our own Atlantic seaboard, around the borders of the Mexican Gulf, or in its latest discovered field, the coasts of Brazil, is essentially one disease. It is a disease of the strongest and most unmistakable individuality.

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* This paper contains the substance of some remarks offered by invitation to the Academy of Medicine at its last meeting. They were hastily prepared, with no intention of publication, and this fact must apologize for the want of systematic arrangement, or for any expression unworthy the deliberate dignity of print.

We see everywhere substantially the same mode of attack, the same duration of the disease, and the same pathological changes, especially the general colliquative and hemorrhagic tendency, which must be regarded as a grand essential characteristic of the malady; and the fact that the stress of the disease, whatever other organs may suffer, always falls upon the stomach. So that these conflicts of the nosologists must be regarded as evidences that they have not apprehended the true specific defining features of the disease, as the basis of classification.

To furnish an unexceptionable scientific definition of yellow fever, the nosologist must exclude numerous phenomena, some of which are present in one epidemic, others in another, but all in none; so that perhaps no single epidemic shall exactly conform to the ideal type, all diverging more or less in one direction or another, but all possessing the specific features in common.

Now the majority of testimony in the books is to the effect that yellow fever is a disease of one paroxysm; that the original pyrexia having lasted for a period varying from 24 to 72 hours, subsides, and is not renewed. Well, take the typical, the *model* cases of the disease, and this is true. But then many authorities go on to declare that never, in legitimate yellow fever, is there any renewal of pyrexia, and my experience in this regard is that the assertion is very far from being true. I have seen many cases in which there was a distinct iteration of the original pyrexia. I have seen other cases again, where, after the lapse of even the 72 hours assigned as its extreme limit, there was no proper subsidence of febrile action, but rather a conversion of it into a typhoid form, continuing throughout the disease. And these are not the proper cases of *complicated* yellow fever—complicated with the ordinary endemic periodical fevers. These complicated cases, where yellow fever supervenes upon ordinary intermittent or remittent, are also common enough, and sufficiently well marked, and are of great severity. We often see even pleurisies and pneumonias, in a miasmatic locality, assuming an intermittent action, so that similar appearances occasionally observed in yellow fever should be no argument against its properly monoparoxysmal character. But the other class of cases of which I speak, cannot be reasonably explained on the ground of coöperation of the causes of ordinary periodic fevers and the cause of yellow fever, for many of them occur in subjects not suspected of previous taint of miasmatic poison.

These cases are sufficiently distinguished again from those in which true relapse occurs, being produced by some palpable external cause, after convalescence has fairly commenced. The frequency of relapses from convalescence was generally remarked as one of the peculiarities of the epidèmics of 1853 and 1854. Such instances were certainly much more common than the books had led me to expect, and were considered almost desperate.

Now, I insist upon this class of cases, in which there is a renewal of the original febrile paroxysm, not as typical, but as exceptional; but still so numerous and so obvious as largely to qualify the assertion that there can be but one pyrectic period in yellow fever, and to lend some color to the views of those who have described it as a remittent fever. Some writers have seen fit to create a number of species of yellow-fever, according as the brain, the liver, or the intestines suffer more or less in connection with the stomach, but it is unnecessary to dwell upon these refinements here. The only division I should wish to make for practical uses, is into (not to quibble at words) inflammatory and congestive.—I have spoken thus much on this point of the type of yellow fever, because when I used merely to read about it, the discrepancies of authors were the occasion of extreme perplexity to me.

"What is the mode of propagation of yellow fever? Is it contagious?" These are troublesome and dangerous questions, about which I wish to say as little as is becoming; for I know but one instance on record of two disputants arriving at entirely satisfactory results in regard to them—that of the two medical gentlemen in Jamaica, who had an after-dinner discussion which eventuated in a duel, in which both were killed.

I need not state my opinions, but some facts which I have observed may be of service to investigators of these questions.

And first, a few words descriptive of the locality in which my observations have been made.

The island upon which Galveston stands is a long narrow strip of sandy formation, elevated from four to eight feet above the Gulf of Mexico, of the northern shore of which it forms a part. It is separated from the adjacent mainland of Texas by a bay of salt water, which for the greater part of its length varies from one to three miles in width, but opposite the eastern end of the island, where the city stands, expands to a width of about thirty miles. The extremely loose consistence of the soil in most parts of the island forbids the accumulation of stagnant pools. Without the bounds of the city there is scarcely any heavier vegetation than the coarse grasses of the prairies. During the entire warm season a strong and cool sea-wind sweeps steadily northward over the island, with scarcely an intermission. The city is laid out with the most liberal allowance of space to the streets, is far from being compactly built, and is generally cleanly. In the year 1853 its population was about 5,000. The so-called paludal fevers do not, and I believe never did, originate in the place. But during a period of about twenty years, Galveston has suffered five epidemics of yellow fever, some of them of extreme fatality. That of 1853 probably more than decimated the number actually present during its prevalence.

The first cases of yellow fever seen in Galveston, in 1853, were brought from New Orleans. One, the first, in June, a full month before the origination of any case in Galveston. This case, like all the other imported cases, was conveyed to the hospital, at that time in my charge. The patient was kept isolated as far as possible, and certainly was not suspected of propagating the disease. About the middle of July several successive New Orleans steamers brought cases. Insufficient hospital accommodations did not permit the entire segregation of these patients. Within a week after their admission, and before any case had been announced as occurring in the city, there appeared in the hospital three marked cases of yellow fever, two being patients convalescent of other diseases, and the third a nurse. The position of the hospital is remote from the city, upon a high, dry and well ventilated spot, free from apparent local causes of disease. The first case announced as originating in the city, some three or four days after these last, was in my care, the patient being a gentleman, residing in the centre of the city, who had had frequent occasion to visit the hospital, and who had seen some of the imported cases, at the time of their admission. The physician who is so unfortunate as to report the first case of an epidemic is, of course, liable to have the correctness of his diagnosis disputed, if not to be regarded as an enemy of the public peace; but about the ninth or tenth day after the attack of this patient, the pestilence exploded, as it were, in all the denser parts of the town at once. It shortly after manifested itself in the neighboring town of Houston, as well as in some other localities, where it had never before prevailed. It was a noticeable peculiarity of the epidemics of 1853 and 1854, that they invaded and devastated places which, by their remoteness from the great *foci* of infection, and their rural character, had previously enjoyed an immunity.

I was absent from Galveston, at the beginning of the epidemic of 1854, and so had no acquaintance with the facts from personal observation; but, although the citizens are not free from that local pride and jealousy, which so often obscure and distort important evidence, I have never heard a doubt expressed, that that epidemic was of domestic origin, the popular opinion being, that the morbific *fomites* had survived the intervening winter, which was unusually mild. If this theory was true, the *fomites* endured in quiescence several months of hot weather, as the disease was not seen until the close of July. It is worthy of remark, that in the summer of 1855, there occurred in Galveston but two or three sporadic cases of yellow fever, while it was epidemic for the third successive summer in Houston. There was daily communication between the two towns, and previously they had always suffered simultaneously. Houston had no intercourse with New Orleans or any ordinary habitat of yellow fever, except through Galveston. The origin of this epidemic was popularly connected with the demolition of an old house, the workmen thus employed presenting, it was said, the first cases. Several patients were brought thence to Galveston, and placed in the hospital, but did not propagate the disease.

The ordinary symptoms of yellow fever are familiar to you all from the descriptions of the books, and it is unnecessary that I should speak of them except in so far as they involve the point of differential diagnosis, a point which the most experienced observers admit to be one of considerable difficulty and nicety. Indeed, we may as well confess that the physician does not exist who can absolutely diagnose an *isolated* average case of yellow fever in its early stage.

Throughout the entire course of the disease, there is but one symptom which has any claims to be considered exclusively pathognomonic—the last and fatal symptom, the black vomit—and even that is so only taken in its due relation to the precurrent febrile action. I mean, that black vomit, or something very similar to it, is frequently produced, accidentally, as it were, in the course of other diseases—in gastric ulceration, *e. g.*; but no other than the *yellow* fever proceeds regularly and uniformly toward the production of black vomit.

Yet, notwithstanding the absence of any one exclusively characteristic sign, the assemblage of phenomena constituting the first stage of yellow fever is very marked. The historical evidence relating to the case, the exposure of the patient, etc., is, of course, to be considered.

We have generally the slight rigor, by no means so decided, or so long continued as in an average case of intermittent. We have the great vascular excitement, the severe headache and circumorbital pain, the pain in the lumbar region, and in the limbs. Great stress has been laid upon some of these symptoms, particularly the circumorbital pain, and that in the calves of the legs, as being peculiar. They have never seemed so to me. It is true, they are sometimes all very intense, but I think we often see them the same in kind and in degree in cases of the ordinary remittent fever of the South. Then we have the thirst and nausea; nothing peculiar about that, certainly—except that the nausea is somewhat more constant and troublesome than in the ordinary endemic fevers. The appearance of the tongue is by no means constant or invariable; we see it assuming a great variety of conditions, the most frequent of which is, that with a silvery white or pasty centre. and red tip and edges. There is, perhaps, a full doughy feel of the abdomen, which is more constantly present in yellow fever, than in any other fever with which it is likely to be confounded.

In regard to restlessness, nervous agitation and jactitation—these symptoms are, as a general rule, decidedly more prominent than they appear even in severe cases of ordinary remittent fever.

So also, it has often seemed to me, is the disturbance of normal respiration. Frequently, in severe cases, the respiration is hurried and interrupted by deep sighs; there is a *besoin de respirer* from the very inception of the disease; a fact worthy of attentive consideration, for its relation to those anatomical changes of the blood, which, I am persuaded, are an important part of the pathology of yellow fever.

Perspiration, I have generally found easy to be excited or spontaneously occurring, soon after the cessation of the rigor, and usually abundant. The odor exhaled from the body of the patient is strong and characteristic; it is as noticeable and as peculiar, as that of small-pox, *e. g.*

But, after all, the sign upon which I find experienced and judicious observers principally relying, as a diagnostic in the outset of the fever, is (what is of all most difficult of description) the physiognomy of the patient. Sometimes his mere anguish may overpower less intense shades of expression; but, apart from this, there is a peculiarly excited and anxious aspect; the face is deeply flushed, the nostrils tense and quivering, the eyes injected, preternaturally brilliant and glittering, sometimes almost fierce. The aspect, indeed, is somewhat that of the beginning of intoxication; when the subject is properly "flushed with wine," and before he passes beyond the stage of full exhilaration, before there appears any relaxation of the features or watery suffusion of the eyes. Cases are sometimes, though rarely, seen to present a circumscribed blush, not extending beyond the cheeks, of a curious bright *powdery* pink, looking so like an artificial application, that one almost expects to remove it with a handkerchief; and this is associated with a singular shining whiteness of the sclerotic, and with persistent dryness of the skin. Such appearances are highly unpropitious.

The *tout ensemble* of these invasive symptoms of yellow fever is certainly very striking, more easily recognized than described, and, except where the physician is taken by surprise, not very liable to be mistaken for any other disease: except, that curious fever as yet rather obscure in medical literature, popularly known as the "dengue" fever.

It is a very interesting fact, that we have here a disease, showing the same tendency to extensive epidemic prevalence as yellow fever, and possessing, as I have seen it, absolutely every invasive symptom in common, which yet, after about the third day, entirely disappears, and leaves the patient to recover from simply a greater or less degree of debility. I have never known a fatal case, or one leaving any serious sequelæ. And yet, the onset of this disease is apparently no less violent than that of yellow fever. This allusion to the dengue is intended to apply to that disease only as I have witnessed it. I have no familiarity with its history elsewhere.

As the yellow fever advances from its first stage, a number of new symptoms manifest themselves, making its character sufficiently unequivocal. Ordinarily, upon the subsidence of active pyrexia, there is remarkable prostration of strength. This is frequently entirely out of proportion to the violence of the preceding symptoms. Many patients, in whom the vascular excitement has been slight, and has early subsided, are left in this state of profound lassitude, which frequently is the only remaining symptom of the disease; with proper care, they go on uninterruptedly to convalescence; but any, the slightest, imprudence or exposure during this state may be productive of the worst results. Concurrent with this physical state is an analogous mental condition, varying from mere quietude and composure to indifference, or, in grave cases, torpor. The patient may be aware of his danger, but seems incapable of feeling the emotion of alarm or distress.

Now this is just the state of things which is so deceptive to the inexperienced observer. There is an entire disappearance of active phenomena. There is nothing palpable, nothing that you can put your finger upon to treat. In any other acute disease than yellow fever it would be reasonable to suppose that the patient was fairly in the high-road to recovery. But the young practitioner leaves his patient in this state, confident of his safety, and calls the next morning to find—perhaps that the patient threw up black vomit during the night, or even that, without perceptible reason, he sank from his state of the day before, and died.

In strong contrast with these the ordinary appearances, are the unusual cases familiarly known as "walking cases," which preserve the specious aspect of strength to a greater extent than in any other fever.

In this fortunately small class of cases there may occasionally be seen a semblance of mental activity and cheerfulness even, forming a grotesque travesty of high health. I know few psychological symptoms more strange and repulsive. A very small proportion of cases exhibit violent mania, a screaming delirium, persisting to the last breath of the patient.

An inordinate and irrestible hunger is a frequent phenomenon in the second and latter stages of the disease. This, occurring before the establishment of convalescence, is a threatening symptom. It may be classed with the erotic excitement which is described by many authors as sometimes existing about the same time, but which I have never seen.

During the apyrexia, the perspiration, free almost from the commencement of the attack, often becomes profuse, even colliquative. This is an unfavorable indication. It is often associated with a small, frequent, thready pulse, coldness and deep lividity of the skin, a doughy torpidity of the features, and shrivelled extremities, while the peculiar odor of the first stage of the disease is succeeded by one insupportably disgusting—such a perfectly cadaveric, dissecting-room stench, that it seems almost a violation of chemical laws that it should be emitted from a living body. This odor alone, in the absence of other striking symptoms, has sometimes determined an unfavorable prognosis, and I consider it of as fatal import as the black vomit itself, or any other symptom. In some severe cases an extreme sensibility of the epigastric region is a remarkable and alarming symptom. This is not like the comparatively dull and deep-seated tenderness of enteritis, but it is fully as acute as that of peritonitis. Even when the patient is lying at ease, he will shrink and exclaim before he is touched, if he sees the hand of the physician approaching the epigastrium. It is the more remarkable, as I have never seen the evidences of peritonitis in a yellow fever autopsy. This intolerance of handling sometimes seems to be rather on account of a nervous horror than of real pain, for I have had patients grasp at my hand as it approached, and then to apologize with a smile, for "being so foolish," hardly knowing what they had feared.

In regard to the yellowness, which is so prominent a feature of the disease, its value, either as a diagnostic or prognostic indication, is materially impaired by the irregularity of its appearance. Its very early manifestation is decidedly alarming; but then, on the other hand, many fatal cases do not exhibit it until after death. Its appearance about the sixth day is considered favorable; so much so, that some writers have elevated it to the importance of a critical sign. Unjustly so, however, for the majority of both mild and severe cases first show it about this time, and as in some fatal cases it is not seen until after death, so in some mild cases it is first seen, not at the beginning of convalescence, but during its progress.

The train of hemorrhagic symptoms in yellow fever is of the highest interest and importance in both the diagnosis and treatment of the disease. These hemorrhages occur in a great variety of situations, and for the most part in the second and last stages of the disease. It has never happened to me to see a spontaneous hemorrhage in the very outset of the disease, though epistaxis is spoken of as sometimes occurring early. But, during the state which ensues upon the active pyrexia, hemorrhages from the nose, the gums, the tongue and fauces, the mucous surfaces of the stomach and bowels, the uterus, the scrotum, and extravasations of blood beneath the skin, manifested by ecchymoses and vibices, are very common. When these discharges take place from the nose, the mouth, or the uterus, they are regarded by many as salutary and even critical in their effect. On the contrary, I do not consider any hemorrhage whatsoever occurring after the first stage of the fever a favorable symptom. Some are certainly less dangerous than others—a hemorrhage from the nose than a hemorrhage into the stomach, producing black vomit—but I do not believe that the nasal discharge can forestall and prevent the gastric. For these hemorrhages are strictly passive, are preceded by no *molimen hæmorrhagicum*, and, I take it, one passive hemorrhage does not relieve another. Those who attach such importance to the derivative power of these discharges should, consistently, bleed their patients when black vomit is apprehended and no spontaneous hemorrhage appears; but no one has been bold enough to propose such a proceeding at this stage.

In these bleeding cases the blood, having nearly the color and consistence of blackberry juice, drips slowly and steadily from a free surface, perhaps for hours in succession, and in quantity to fill a large vessel, often without the formation of a single clot. It is evident that extreme tenuity of the blood combines with atony of the capillaries to give this hemorrhage its peculiar character. When it takes place from the mouth, it is usually accompanied with scorbutic sponginess of the gums. I remember one patient in this condition who easily removed a number of teeth with her fingers.

A few words in regard to black vomit will finish my remarks upon the phenomena of yellow fever. It seems curious, at first sight, that the character of this discharge should admit of such obstinate controversy. It is incontrovertibly the result of a hemorrhage into the stomach; but then it is something more than an ordinary hemorrhage, so that the objection, often urged, is well founded, that the artificial black vomit produced by the familiar experiment out of the body, is not exactly identical with the genuine article. Now the hemorrhage producing the genuine black vomit is of the same unusual character as that already described as flowing from the nose, etc. There is an alteration in the condition of the blood before it is extravasated, and it exudes from a large surface of the stomach in a peculiar manner. I have seen this neatly illustrated by some cases, to one of which I will briefly allude.

The attack of this patient was sudden and violent. He had retired early in the evening, with a slight sense of indisposition, and awoke during the night with all the early symptoms of yellow fever in an intense degree. He was especially harassed by laborious and uncontrollable vomiting. This continued for several hours, when, after a short quiescence, the attendants were surprised by the ejection of a dark-colored matter which they not unreasonably supposed to be the genuine black vomit. Its resemblance to that fluid was certainly considerable, but a closer examination showed it to contain distinct coagula. The identity of it with the ejection of ordinary hæmatemesis was further shown, when, after an hour or two from its first appearance, it was gradually replaced by decidedly red blood. This gastric hemorrhage was apparently active, and not improbably proceeded from vessels ruptured in the previous efforts to vomit. It ceased entirely after a few hours. But this same patient, at a subsequent period of the disease, a period characterized also by the occurrence of passive hemorrhages from the nose and mouth, had the genuine, unmistakable black vomit.

The black vomit is seen in different degrees of elaboration. The appearance of the dark matter is often preceded by the ejection of a transparent, glairy fluid, containing a greater or less quantity of small brown flocculi, strongly resembling clear chicken broth. Something very similar is often seen in the gastritis following a drunken debauch. Its prognostic import is scarcely less serious than that of the coffee-grounds fluid itself.

It has happened to me to see the results of a considerable variety of treatment in the hands of other practitioners, as well as to make experiment of some diversity of means in my own practice before determining upon the most satisfactory plan.

The so called abortive treatment, with large doses of quinine early in the disease, has been so much discussed and so highly extolled that it requires notice here.

For several years previous to the great epidemic of 1853, this practice was extensively pursued and relied on in the apparently mild forms of the disease which prevailed in New Orleans, and it was commonly regarded as the grand modern improvement in the treatment of the malady. But during that epidemic the quinine practice fell into general, and I believe merited, disrepute even in that city, where it had been most enthusiastically lauded. I saw many cases in which I could not doubt that the results of this treatment were disastrous, and exceedingly few where I could fully satisfy myself of any good effects from its use, however confidently they might be appealed to as evidences in its favor. It seemed to me to be generally ill-tolerated by the stomach or the head. My conviction of the strictly self-limited character of yellow fever is so firm, that I would as soon attempt to *cure* small-pox, *e. g.* I do not believe that any remedial means can absolutely preclude the subsequent *stadia* of the disease. It is generally admitted that a single large dose of quinine, given at the outset of the disease, is much better tolerated than smaller repeated doses, or than one given after the subsidence of pyrexia; and whenever it is of real benefit, that should be attributed to the peculiar sedative effect of the remedy in the stage of vascular excitement, and not to any supposed antiperiodic action.

At the beginning of the epidemic of 1853, I saw some instances of depletive treatment. I knew several patients to be bled—they died. One of my own very first cases, before I had ever fairly seen the latter stages of the disease, I bled, and he died. I never repeated the experiment. Topical blood-lettings, cupping at the back of the neck and upon the abdomen, were very generally employed, and often to the great alleviation of pain. I regarded this as owing less to actual depletion than to the derivative action of the cups, and usually found as satisfactory effects from dry cups.

The mercurial plan I have seen very fully exemplified, in all degrees of thoroughness, from the mere use of a mercurial cathartic up to the full saturation of the system. Indeed, the employment of either the blue-pill or calomel, with one intention or another, is almost universal. The few remaining advocates of mercurial saturation repeat the assertion that "salivated patients never die," as if it were incontrovertible proof of the success of their practice. The assertion is not strictly true; but if it were, it would still be fearfully ambiguous; it may as readily mean that the patients who died could not be salivated, as that the salivated patients could not die; and the former, I am sorry to believe, is the real significance of the fact. My own persuasion is, in view of the hemorrhagic tendency of yellow fever—its essential characteristic feature—that any use of mercurials, as cathartics or otherwise, is strongly contraindicated. We have other cathartics not liable to the same objection, which are capable of performing all the good results I have ever seen from mercurials.

The most rational and successful treatment of yellow fever, according to my experience, is eminently conservative, looking constantly to the self-limitation of the malady, and confining its efforts to the mitigation of symptoms. Perhaps, when I attempt to describe it, its unimposing simplicity of detail and apparent inertness may seem hardly worthy of your attention. It is scarcely satisfactory, indeed, that we should have before us so raging a malady, and should speak of such trifles as castor-oil and sponge-baths. But what shall we do? We have already seen how intolerant the fever is of more active interference, and we can but hope for better results from a different plan. A matter which in an ordinary disease would be trifling, may in this become critical.

The rapid progress of the disease renders every moment of importance. The means ordinarily resorted to, before the arrival of the physician, to favor perspiration, are judicious, consisting of the hot mustard bath and warm diluent drinks, the infusion of orange-leaves being a popular favorite in places where they abound. When the patient expresses a preference for cold water and ice, I do not refuse them; but I have generally found the warm aromatic drink as agreeable to the patient, more assuasive of thirst, and more readily retained by the stomach, which should be assiduously conciliated. As has been remarked, there is usually no difficulty about the production of perspiration, but it is not always followed by a mitigation of the febrile symptoms. Many cases are seen which have from the outset a moist skin, and which go on with uninterrupted moisture to a fatal termination. Torpidity of the bowels is so invariable an accompaniment of the fever, that it is safe to administer a cathartic as soon as convenient. The use of the harsher cathartics is often productive of uncontrollable irritation of the stomach and bowels. Castor-oil or sweet oil with lime juice, where it can be retained, is from its mildness and efficiency, the most suitable. Its action may be advantageously quickened by enemata. Some judicious practitioners prefer the saline cathartics, and they certainly are sometimes of great service. If the pain or restlessness be great, and do not abate with the use of other remedies, I do not ordinarily hesitate to employ opiates, the Dover's powder being preferred. I have generally found them well borne in full doses, having immediate tranquillizing effects upon the irritable stomach and general nervous excitement, and not suspected of any more remote unfavorable influence.* The application of cups has already been spoken of. Rubefacients are often equally useful in alleviating pain, especially that of the lumbar region, which is sometimes so distressing.

The fact previously alluded to, of the profound exhaustion of vital energy, should be kept constantly in view. In no disease is absolute repose of greater importance. In cases of any severity the patient should on no account be allowed to rise from his bed. The transportation of patients from one place to another is of course a most dangerous proceeding. I will venture to repeat the remark, for its extreme importance, that this prostration is often out of all proportion to the apparent violence of the preceding fever, so that the mildest cases should be attentively watched and nursed, until beyond the possibility of relapse.

It should also be remembered, that, after the subsidence of vascular excitement, the calorific powers of the system are reduced to a minimum; so that, while perfect ventilation is secured, the patient should be guarded from direct currents of air. Even momentary exposure, by the patient's throwing off his covering, is sometimes followed by capillary stagnation, manifesting itself in blueness and lividity of the skin—a most untoward event.

The state of the skin should be carefully watched. If it is excessively hot or dry, great relief is afforded by frequent sponging with tepid water and alcohol. If the perspiration should be excessive, a more stimulating application, as of dilute alcohol and vinegar, may be of service. If inclined to lividity, brisk friction with flannels may be used.

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* I cannot speak with equal confidence of the use of opium in the subsequent stages of the disease. Though it often seems to be required, and actually does all that can be asked of it, yet it sometimes fails of a favorable response from the system, and is followed by prostration and stupor.

As soon as it is apparent that there is a true cessation of pyrexia, a moderate use of stimulants is usually serviceable; and in this regard, the taste of the patient may to some extent be consulted. When the case has decidedly turned toward convalescence, porter is preferable to the merely alcoholic stimulants.

In the cases of passive hemorrhage which have been described, I place little confidence in the host of local styptics recommended. I have generally had excellent results from the free internal use of nitric acid, in combination with serpentaria or some other stimulant.

When the fever degenerates into the typhoid grade of action, characterized by extreme vascular depression, by intense dirty yellowness and lividity of the skin, by a tongue black and dry, or covered with a brown sordes, or cracked and bleeding, the remedy, beyond all comparison, and sometimes beyond all expectation, has been, in my experience, the oil of turpentine. I attribute to this remedy a threefold action, as a stimulant, as a hæmostatic, and as having a peculiar alterant effect upon the mucous surfaces. Whatever its mode of action, its curative effects in this class of cases are most remarkable.

Art. VI.—*An Account of a Case of Congenital Deficiency of the left Kidney.* By C. E. Isaacs, M.D., one of the Surgeons of the Brooklyn City Hospital; Consulting Surgeon of Kings County Hospital, etc., etc.

On examining the body of a male infant, three months old, who had died of pneumonia, in the King's County Hospital, it was discovered that there was no kidney on the left side. On the right side, the kidney was apparently about twice its natural size, and of the usual form. Its superior extremity was in close contact with the diaphragm. The inferior portion of the kidney reposed upon the soft parts, in the upper third of the right iliac fossa, and extended as far down as the middle of the external iliac artery. The length of the organ was two inches and three quarters; its transverse diameter, one inch and three quarters; its thickness, one inch and a quarter. Its external surface presented the usual lobulated appearance of the infantile kidney. When split open by the knife, in the usual manner, its substance appeared to be healthy. The division between the cortical and medullary portions was well marked. The ureter was about twice its natural size. On the left side, not a trace of a kidney or ureter could be discovered. The left supra-renal capsule was about the same size as the corresponding one on the right side. Both occupied their usual positions. The right ureter was traced down, to its usual point of entrance, into the bladder; and on opening this organ, the mouth of that tube only was apparent; none other could be detected. It may be remarked, that the child had always been healthy, up to the time of the fatal attack of pneumonia, and that nothing unusual had been observed relative to the functions of the urinary organs. The right kidney, from its size, had evidently sufficed to perform the duties of both; and practically it might be considered, that the two organs were consolidated into one. The specimen is preserved in the Kings County Hospital.

As a case of this kind is seldom met with, it is believed that its rarity will sufficiently justify its publication.

Art. VII.—*Remarks on the Treatment of Gleet by Local Remedies.**

By Wm. Otterson, M. D., of Brooklyn, N. Y.

The slight discharge from the urethra so often met with after an attack of gonorrhœa, and variously known as "chronic blennorrhagia, gleet," etc., occurs under various circumstances, and its seat, cause, and treatment, are differently given by different authors. Cooper, Vidal, Acton, Hunter, Chelins, etc., give different views of the seat and pathology of the disease, yet they all concur in the general plan of treatment—viz., stimulating and astringent injections, cubebs, terebinthinates, and speak, as a last resort, of sometimes using the bougie. We find these writers placing the seat of the disease in the prostate, Cowper's glands, the lining membrane of the urethra, the lacunæ, and in the fossa navicularis. I am disposed to think that Sir A. Cooper was nearest right, and that the glans penis and the lacunæ therein are the real seat of this affection. What the precise pathological condition of the glans is, I am unable to say; but it would appear that owing to its delicate structure, and the fact of its being the most frequent seat of acute attacks, that the onus of the chronic form of the disease should be centered upon this portion of the organ; and that many of the most obstinate cases of gleet (in the absence of stricture and disease of the prostate) are dependent upon a morbid condition of the glans, and not upon any disease or change of the lining membrane of the urethra itself. My reasons for this belief are: 1st, the amount and character of the discharge; 2d, the point of irritability upon passing an instrument; 3d, the inadequacy of injections to control the disease permanently; 4th, the failure of internal medication or hygeine to exert any special influence over it.

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* Read before the Brooklyn Medical Society.

1st. The discharge is usually found to be nothing more than opaque mucus, which may vary in consistence according to circumstances. This in the morning occupies the meatus, at times almost blocking it up, and is easily removed if the patient runs the finger along the under surface of the urethra, beginning about an inch from the meatus, when the secretion escapes; after that, the urethra may be squeezed from the prostatic region to the meatus, and yet no more of the discharge be procured. 2d. In passing an instrument, when about an inch from the meatus, and corresponding with the fossa navicularis, the patient complains of pain, and after the instrument passes this point, the whole tract of the urethra beyond is free from any irritability. This I have found as an almost invariable result in my cases of obstinate and long standing gleet, when there was no stricture. 3d. Injections of all kinds have utterly failed to make any permanent impression upon the discharge, though there have been remissions for a few days at different times. 4th. Internal remedies have failed to exert any perceptible influence over it.

If the lining membrane of the urethra were alone involved, the result of medication would be different, for we all know, that in acute gonorrhœa, many of what are called specific medicines, *do* exert a modifying and decidedly beneficial influence over the diseased tract of the canal. But in this form of gleet they fail, because their action is not adapted to the disease of this particular structure. If Cowper's glands are the seat, then the application the author makes in these cases, would appear to be useless, as the remedies are not applied to the portion of the canal where they are situated.

Treatment.—I first examine the patient to ascertain if there is stricture, narrowing of the canal, etc., and if there are any such obstructions the usual measures are adopted to overcome them. Sometimes this alone will effect a cure, but if the discharge continues, I introduce a No. 8 metallic grooved bougie, the groove being filled either with citrine ointment or calomel; the latter I prefer as being more certain in its action. The instrument need be passed only a sufficient length up the urethra to get the point beyond the glans penis, when it should be carefully revolved several times; it should be allowed to remain in for three or five minutes, and then a probe, adapted to the curve of the instrument, should be passed down the groove; if they are then withdrawn simultaneously the whole of the calomel will be left in apposition with the parts.

This may be repeated two or three times a week at the same time that the bowels are kept soluble. Upon withdrawing the instrument a little smarting may be complained of, and perhaps a few drops of blood follow, but this is not important. If this plan of treatment is followed assiduously, you can assure your patient with much confidence that a very short time only will be required to remove every trace of the most obstinate and hitherto intractable gleet.

The writer has had quite a large number of these cases under his care, and formerly was in the habit of adopting the stereotyped practice, and have them linger from month to month, and finally to pass into other hands, but since adopting the view that *benefit can only be derived by direct alterative medication to the seat of the disease*, and pursuing the plan of treatment laid down in this paper, he has not failed to cure a single case, marked benefit arising after three or four applications, even in the most unfavorable and long standing cases.

As some authors have recommended the use of mercury, with a view to produce its specific effect upon the system, I transfer one case from my note-book, illustrating its action in this affection.

Case 1.—L. W. consulted me on account of a chancre, which I cauterized with solid nit. argent., and after giving a cathartic kept him upon blue mass and opium, until its specific action became manifest, and as there was some induration, kept up a slight mercurial action for some time by hyd. potass. and ext. sarsp. comp. This treatment being continued about two weeks, the cancer healed kindly, when, for the first time, the patient informed me that he had been suffering from gleet for about eight months, which, at the time he first applied, was quite severe, but he, thinking that the medication and regimen adopted for the cure of his syphilis, would also suffice for his gleet, did not mention it till after his primary disease was cured; but finding he was not free from his old discharge he wished further advice. I proposed the bougie, but he having been present when I had introduced it on his friend, desired that some other measure should first be tried. I consented, after giving an unfavorable prognosis. The old routine of injections, etc., was gone through, and after one month's trial he concluded to submit to the bougie. Upon examination no irritable point was found after the point of the instrument passed the fossa navicularis, no stricture or narrowing of the urethra. A perfect cure was effected in about three weeks, no relapse following.

Case 2.—J. D. applied to me on account of a gleet which had troubled him about five months, the sequel of a gonorrhœa which he had treated himself with injections and bals. copab. Upon examination, I found some narrowing of the canal just anterior to the bulb, with irritability at this point, and at the point corresponding with the seat of the fossa navicularis.

This constriction readily gave way by the use of graduated bougies, but the gleet still continued. I treated him upon the old plan for six months, during which time all the different remedies were tried, and strict rules of regimen enjoined. In this time there were several remissions, but nothing permanent. At last I introduced the medicated bougie twice a week, at the same time, removing entirely my dietetical restrictions. At the end of six weeks, although he daily drank large quantities of beer, he was entirely cured. Some may be disposed to think that this case required tonics and nourishing diet, but these had been given as one of the changes during the six months of the old treatment.

ART. VIII.—*Dr. Tully's Classification and the Principles of Therapeutics.* By JEFFERSON CHURCH, M.D., *Springfield, Mass.*

IF it should be our endeavor "to define and elucidate the principles of therapeutics," rather than "to augment the therapeutic arsenal," it is important that we should know from whence these principles come, and how they may be best brought to light. By principles are understood, those truths which are intuitively or demonstrably such, or that are capable of positive or absolute proof. In its application to therapeutics, the word must have reference to those truths which are necessary to direct us to the right use of medicines; or this is the sense in which we have concluded to understand it on the present occasion.

It will be found doubtless that the principles of therapeutics, and its systematic arrangement or classification, have a more intimate connection with each other than is generally supposed, and that as the principles become more clear and the classification is improved and perfected, the more close and intimate will their connection appear. The rationale is this: both a *true* classification and the *true* principles must have the same foundation, viz. the facts which are the objects of the science. In reality, it would appear to be the distinctions that exist between the facts, rather than the facts themselves, which are the foundation of both; for where there are no distinctions between the facts, there can be no classification of them, however numerous; and where there are no distinctions or dissimilarities in the powers and operations of medicines, there can be no principles of therapeutics. The point here raised may appear clearer as we proceed, and assume some importance; but though it seems to have been clearly perceived by Dr. Tully, it is not clearly stated by him, and he expressly says that his "classification is founded upon the different and distinct powers in materia medica;" in other words, upon the facts themselves. The point being established, however, it would require no change in his system, nor any material variation in his language or manner of presenting it; nor would it render clear, precise and accurate definitions of the facts any the less necessary, as it is only from our clear perceptions of the facts that we can get clear perceptions of their distinctions or dissimilarities. From the use and importance of these distinctions, these are or should be as truly the objects of the science as the facts themselves; indeed, for the purposes here contemplated, they are among even its most important objects. The true principles of therapeutics, and its true classification, both originating from these distinctions, must both vary, as our ideas of these distinctions vary; and will both be improved and perfected, as our recognition of these distinctions becomes clear and perfect.

To fix in our minds, therefore, those things from which the principles of therapeutics originate, and to fix them in such a manner that we may all understand them alike, and thus be enabled to communicate clear and precise ideas of them and in the briefest manner, is one of the purposes, and the most important one, for which classification is designed. Though the best arrangement that a science admits of, must of course afford us the best facilities for discussing it, and for obtaining clear and comprehensive views of it, yet, as a test of the correctness and value of classification, we should look rather to its tendency to unfold principles, and to assist us in comprehending and retaining them.

The importance, not to say the absolute necessity of a true classification in materia medica, has not yet been fully stated, if indeed it has yet been fully comprehended by any writer. No one can estimate the value of the principles that such a classification would unfold till such a one has been presented. The urgent necessity for defining and elucidating the principles of materia medica, may be inferred from the incongruity in all our systematic arrangements of it. It may be inferred also from the growing skepticism in the efficacy of medicines, which is apparent among many leading members of the profession; if not from the confidence that is placed in the various kinds of irregular practice, as they are called, in nostrums, patent medicines and even charlatanry. Without principles, of course, one mode of practice will be as rational, if not as regular as another, and we leave it to those who are more nice in making distinctions than we are to say which is most likely to be successful. Here, at least, it would seem hardly worth while to keep up a distinction that would be only nominal. If the regular practice of medicine, so called, is not to be abandoned or superseded, or merged with the irregular, the importance of true principles or facts to guide us in the use of medicines is obvious, and the necessity of a true classification as the foundation of such principles, or the means of developing them, is just as obvious.

It is said—though it is believed by those who have never examined the work for themselves, and who cannot therefore be competent judges in the matter—that the author makes many distinctions that will never be recognized by the profession. But the error of making too many distinctions, or even of attempting to make them where there are none, will be far less than that of failing to recognize them where they really exist. As has just been intimated, it is the ignorance or disregard of distinctions on the one hand, and the recognition and maintenance of them on the other, that constitutes the difference between the quack and the regular physician. It is clear that distinctions should be made wherever there are principles at stake; and it will be found, doubtless, that there are always principles at stake wherever there are distinctions to be recognized; and whether those made by Dr. Tully are ever to be recognized by the profession or not, the question of their utility and importance is to be examined with reference to this point. If in pathological anatomy no distinctions were made but those that give rise to some principles of practice, pathological anatomy would be narrowed to a much smaller compass than at present: and if some microscopic achievements, to which much importance is attached, were to be brought to this test, they would dwindle to insignificance. Should it be said that these distinctions and these achievements, though apparently useless at present, may yet become the foundation of important principles, will not the same plea in behalf of useless therapeutic distinctions, even if Dr. Tully makes such, be sufficient and valid? And yet the most indefatigable seekers after distinctions in pathological anatomy are the first to discover a superfluity of distinctions in therapeutics. That there is so much interest felt at present in pathological anatomy upon which so few principles of practice are, or can be, established, to the neglect of therapeutics where all is practical, or may be, seems unaccountable. But it seems superfluous to insist upon the importance of recognizing distinctions wherever they are; but in physic, as in every thing else, it is profitable occasionally to go back, and examine first principles.

But it was our purpose to illustrate the truth of the proposition with which we commenced, or to show more fully the intimate connection between the principles of therapeutics and its classification; and here we shall be obliged to refer again to Dr. Tully's classification, which may be profitably referred to again and again for this and other purposes. Having fulfilled this to the best of our ability, we may have occasion to refer to it again for another purpose; for our own profit, if not for the profit of others. His arrangement is founded wholly upon the operative effects of medicines, or upon the different and distinct powers that there are in materia medica; the number of classes corresponding to the number of these powers. It is doubtful whether an arrangement or classification upon any other basis than this, would be in any respect better than a simple alphabetical arrangement; and though the number of these different and distinct powers is uncertain or undetermined at present, yet it is one of the merits of this system that it not only assists us in obtaining clear and comprehensive views of therapeutics, tends to unfold and elucidate its principles, furnishes a guide to our future investigations, but suggests the way, and provides for its own improvement. If the number of these powers, each of which is made the foundation of a class, shall be ascertained to be either too great or too small, a corresponding change in the number of classes will take place naturally and unavoidably; and it is another excellency of this system, that in either case, every article and every process that may be usefully employed in the treatment of diseases, can find a place and must necessarily be included in some one of them. Even bloodletting, which can never be looked upon as a mere cooling process, and can, therefore, find no place among the refrigerants of other writers, and on this account, doubtless, is wholly omitted in their systems, will stand at the head, and as the most prominent type of the antiphlogistics, and will be largely treated of as such ; while shampooing and the various kinds of exercise, active and passive, will have their appropriate places in the system.

That the most obvious and certain, and by far the most important effects of either bloodletting, purging by the saline cathartics, the internal use of tartrate of antimonia and potassa or nitrate of potassa, are to lessen the force of arterial circulation, and the vital powers of the system will be generally admitted. On the other hand, that by far the most important effects of the internal use of alcohol, wine, etc., are directly the reverse of this, viz. to increase the strength of arterial circulation and the vital powers generally, especially where such effects are needed, will be as universally admitted. There are, perhaps, no two sets or classes of articles more potent for good when rightly employed, or for evil when wrongly employed, than those which possess either of these opposite or opposing powers in a prominent degree ; and hence there are none in regard to which it is more important that the principles of therapeutics should be clearly defined and elucidated. We have the highest authority for saying that the skill of a physician, in the treatment of febrile diseases especially, depends mainly upon his judgment in selecting one or the other of these classes, or upon his knowing when to support and sustain the powers of life on the one hand, or to reduce them on the other. If it is best to have any distinctions at all in therapeutics, it would seem that the distinction between these two antagonistic powers should be maintained ; and if there is any other way of arriving at the principles of therapeutics, than by recognizing and keeping such distinctions always in view, it is desirable that it should be pointed out. And yet, there are those who advocate the employment of bloodletting, and the use of wine or alcohol at the same time, or in immediate succession, though upon what principles we are not informed. True experience there is no gainsaying, though it should unsettle all our principles ; but experience, when directly contrary to rational and apparently plain principles, should be thoroughly tested before it is admitted to be true, and when its truth is admitted, the principles will need to be revised and corrected, or new ones should be found to meet the case ; a labor that will devolve, of course, upon him who claims to have gained the experience. Empiricism should always be looked upon as an intruder, and never be welcomed, especially when there are so many at hand, whose vocation it is to entertain it. With our present understanding of principles, he who says that he has seen the best effects from bleeding and the use of alcohol at the same time, should speak it rather lowly. It should not be whispered even in the presence of an empiric.

It should be stated also, that there are teachers of medicine, those too belonging to the scientific class, who have adopted the notion that every power in materia medica is a stimulant power ; or who teach that bloodletting even is not to be resorted to except for its stimulating effects; and it is quite remarkable that those who thus do away with all distinctions of this sort, who attribute the same effects to blood-letting as to the internal use of alcohol, or what amounts to the same thing, who apply the same name to both, are the most zealous in inculcating upon their pupils the importance of being governed by general principles, in their treatment of diseases. This is not the only instance that might be mentioned, perhaps, of those who are eloquent in their praises of a certain kind of knowledge, but who, nevertheless, seem to have the most inadequate conceptions of its use and importance, and even the manner in which it is to be obtained. If we mistake not, a similar inconsistency may be charged upon some modern pathologists, as we may have occasion to show, when speaking of Dr. Tully's pathology. It is much shorter and easier, to insist upon the importance of general principles, than to state them, or to show how or where to look for them. Nothing can be more prejudicial to the principles of therapeuties than to confound all distinctions in the powers and effects of therapeutic agents, and for one who insists upon the importance of principles to do this, it is like tearing away the foundations of an imaginary superstructure; while the more numerous such distinctions are, and the more clearly they are perceived and maintained, the more numerous, important, and practically useful, will be the principles that arise from them, and that arise from nowhere else.

Affirmation is as good as twaddle, and one may as well speak what he honestly thinks himself, as to speak what others may be dishonestly pleased to have him think. If he is wrong, there are enough who will stand ready to set him right, and who will not be very likely to be better employed than in doing so. We say, therefore, and without any expectations of being set right, that nowhere are the principles to govern us in the use of these two classes of articles, (which, as just stated, are as important as any others, and in regard to which there is so much difference of opinion, so much uncertainty, inconsistency, and confusion existing at present,) so clearly stated, defined and elucidated, and in such a manner, as to commend themselves to every intelligent physician, as in Dr. Tully's proëms to the antiphlogistics and the antisbesties. This, however, is not saying that his manner of stating them may not be greatly improved upon.

So broad is the distinction between these two classes, and so important are the therapeutic principles growing out of it, that it becomes indispensable that the classes should be called by the most significant and the most appropriate names. To call those articles whose most important effects are to lessen the vital energies and strength of action in the sanguiferous system refrigerants or mere coolers, would be obviously a misnomer, as it could not fail to mislead; and to call those which produce the opposite effects stimulants, a name that has been so extensively and so vaguely applied as to require a definition by every physician who uses it, and every time he uses it, in order to express the idea he may wish to convey, would, if it expressed any idea at all, be almost as sure to mislead. For the appropriateness and the significance of the terms antiphlogistics, as the name of one of these classes, and antisbestics, as the name of the other, see Tully's Materia Medica, where the etymology and exact signification of each are given.

It will be seen, therefore, that, in order to define and elucidate the principles of therapeutics, we must have regard to its nomenclature as well as to its classification, or to those distinctions which classification is designed to impress upon us and to perpetuate in our memories, as well as to make it easy for us all to understand them alike, and to communicate our ideas of them by a single word. These things—its principles, its classification, and its nomenclature—each originating from the distinctions the importance of which we are insisting upon. have a relation to each other so close and intimate that the improvement of the one must necessarily keep pace with the improvement of the others.

It is useless to carry the illustration further to show that the distinctions between all the powers or classes, or between the operative effects of medicines, must be the foundation of principles, and, with a single exception to be alluded to hereafter, the only foundation of principles in therapeutics. It is from pathological distinctions that indications arise for the fulfillment of which the principles of therapeutics are to be applied. There are but few instances in which two powers or classes have the same antagonistic relation to each other as in the case we have selected. As a general rule, instead of operating against each other, they may be exerted simultaneously, and without in any way conflicting with, hindering or interfering with each other. Though the distinction between a narcotic and an antisbestic power, for instance, is obvious enough, and though both may be indicated, and both produce their legitimate effects at the same time, yet it is the distinction that exists between them that must always be kept in view, as it is from this that we are to decide whether they are to be employed separately or in conjunction, as well as whether there are any true indications for either. The same may be said in regard to any two or more powers or classes that are not incompatible with each other, and that may therefore be employed separately or in conjunction, as there may be indications for one or more of them. When the distinction is like that between an antiphlogistic and an antisbestic, or when two powers counteract each other in any manner or degree, it must of course preclude their employment in conjunction, and it is scarcely more in deciding upon the true indications to be fulfilled, than in avoiding these conflicting powers in his endeavors to fulfill them, that the skill and judgment of the physician are evinced.

Nor are the distinctions that exist between the twenty or more classes the only ones that are important to be recognized. There are distinctions among the articles themselves belonging to each class, as respects the strength and quality of their operations ; and, besides, there are articles that possess two or more distinct powers within themselves, and if possessed in equal degree, would require that they should be included and treated of under two or more classes. Opium, for instance, is well known to be stimulant ; or, to use a word that has a signification, antisbestic as well as narcotic. It is diaphoretic also ; and, according to Dr. Tully, it has other powers besides, none of which can of course counteract either of the others, but may all be indicated at the same time ; and if they are not all united in the same article, might be required to be united in the same prescription. That these powers of opium are different and distinct, is shown by the fact that each of them is exerted independently by other articles, or by articles that have no other power. Again, alcohol is antisbestic as its most important power, and euphrenic as its most prominent one. It is also both diaphoretic and diuretic, and lastly, narcotic. For this last it is seldom employed medicinally, though frequently resorted to as a mere luxury by those who can afford it, and by others—those who have a predilection at times for the open air, the wayside, or street-gutter as a place for repose. The distinctions between the antisbestic power of alcohol, or that by which the strength of arterial action and the vital energies are increased, its euphrenic power, or that by which euphrasy or positive exhilaration is produced, and its narcotic power, or that which disposes one to sleep or repose, though they have all been confounded heretofore, and all been comprehended in the word stimulant, are nevertheless real and palpable ; as much so as are the narcotic, antisbestic, and diaphoretic powers of opium, which no one doubts. Its diaphoretic and diuretic powers are obvious and equally distinct from each other, and from those just mentioned. Now whether these distinctions, made and insisted on by Dr. Tully, are ever to be recognized by the profession or not, it is clear that alcohol can never be intelligently or judiciously prescribed, without regard to them. In other words, it is from our knowledge that alcohol possesses each of these distinct powers, and produces each of these distinct effects, that the principles of its therapeutic application are to be deduced.

These compound articles, or those that possess a plurality of different and distinct powers, are quite numerous, and we will now turn to Dr. Tully's classification to ascertain what provision it makes for them, or how they are to be classified and arranged with reference to defining and elucidating the principles of therapeutics. If there are advantages to be gained by arranging all the articles and processes in materia medica in distinct classes, according to their different powers, it is obvious that all those comprehended in each class may be so arranged among themselves, according to their peculiar operations, as to be advantageous also. Those that possess but a single power may be arranged in distinct groups, having reference to the strength or quality of the power ; while all those possessing two or more powers may be arranged in other distinct groups, having reference to the number and sameness of their powers ; the most prominent power, of course, to be indicated by the name of the class, and each of the less prominent or subordinate ones to be indicated by the name of the group ; and in both cases a plain reference will be had to those distinctions upon which both classification and principles are based.

First ascertaining the number of powers known in materia medica, and making each the foundation of a class, the name of which is to be the same as that of the power, and then grouping the articles included in each class according to the number of powers they possess in addition to the most prominent one and which brings them into the class, the name of each group to suggest the name or names of each subordinate power, is not only the most natural and philosophical arrangement, but the most advantageous for all the purposes of classification. Such may be truly said to be "a common sense classification, without arbitrariness, true to nature, and faithful to science." If not the foundation, it will be the repository of the principles of therapeutics.

Dr. Tully notices the different grades in the operation of each class or power, and distinguishes between the primary and secondary, or the immediate and remote effects of medicines. Here also are distinctions to be observed by him who is in search for those principles, the utility and importance of which can never be doubted. No other writer has pointed out these with so much distinctness and fidelity, and in such a manner that when once perceived they can never be disregarded. For the most part, these are alluded to in his definitions of the several powers or classes, the only place in which they can be alluded to in a system of classification. Doubtless, when treating of the individual articles, these will be more fully discussed.

In the mode of managing or prescribing medicines, there are important distinctions to be kept in view. Whether one or the other of the powers of alcohol, for instance, is to be exerted most and preponderate over the others in a given case, depends upon the size of the doses, the periods of their repetition, the accompanying diet, regimen, etc. When used medicinally, its narcotic power may be of more consequence, in preventing or allaying irritation and restlessness, than is commonly supposed. When taken in large doses, in health, and upon an empty stomach, its euphrenic effects will be prominent, intense and almost immediate, but will soon be superseded or transcended by its narcotic power. But when its antisbestic power is most loudly called for, and when large and frequently repeated doses are demanded, as in malignant and other extreme cases, both its narcotic and euphrenic powers will be transcended by its antisbestic power. This has been often noticed by patients themselves and nurses, as well as by observing physicians. In such cases, it is said that the patient takes every hour enough to intoxicate him if he was well, but without any euphrenic or intoxicating effects that are apparent

But the laws of the operation of opium, in this respect, are still more remarkable, and still more important to be understood. When given in small and often repeated doses, though it has as much effect perhaps to allay pain, irritation and restlessness, as when given in larger ones, and at longer intervals, yet the former mode of administering it actually prevents sleep. It is an important fact in regard to the operation of opium, that if a quantity sufficient in all probability to prove fatal in twenty-four hours or less, when taken at once, if divided into twenty-four doses, and one of which is given every hour, no unpleasant effects will result, except this inability to sleep ; and even this can hardly be said to be an unpleasant effect in many cases. But there are circumstances that modify its action in this respect : when wakefulness, restlessness and irritation have been long continued, sleep will take place when it would not otherwise. There is a difference in the susceptibility of different persons to its narcotic influence, especially when its use is first entered upon; and its effects, like those of alcohol, will be modified by its being accompanied with suitable nourishment or otherwise. This subject of transcendency, treated of by Dr. Tully in his introduction, though scarcely alluded to by other writers, is one of great interest and importance. There is another fact in regard to the management of opium, important to be known. When a single large dose is required, as is sometimes the case for the relief of severe pain, obstinate diarrhœa or uterine contractions, if the dose is only just sufficient to meet the case and obviate the symptoms, though the quantity may be six or eight times as much as would be considered a medium dose, its soporific effects will be slight. It is not the less important that this law of the operation of opium should be known from the fact, that this is the only narcotic that can be at all relied on for the relief of either of these symptoms. It has been said that there are cases of diarrhœa that opium will not stop. The same may be said, perhaps, in regard to pain and uterine contractions; but this does not alter the correctness of the general statement. The manner in which disease itself modifies the effects of opium and other agents, is also an important subject, and should be understood by him who is in search for the principles of therapeutics.

In the mode of managing medicines, therefore, there are distinctions to be observed from which principles arise. But to these Dr. Tully's classification has no reference. Distinctions in the operative effects of medicines, and in the mode of managing them, have no connection with each other. The former are susceptible of classification; the latter are not. To all the former, that are most important to be kept in view, Dr. Tully's classification will be found to have a distinct reference.

The superiority of this plan will be seen when contrasted with others. There are other distinctions upon which classification may be based. They may be first divided into three great classes, according as they are derived from the animal, vegetable or mineral kingdom; and then the sub-divisions of those derived from the vegetable kingdom may have reference to the parts of the vegetables used, the roots, bark, stems, leaves, flowers, seeds, juice, etc. or it may have reference to their natural history distinctions, the class, genus or species. Or a classification may be founded upon the different parts of the system acted on by medicines, as the alimentary canal, the sanguiferous system, the nervous system, the muscular system, the glandular system, etc. But none of these modes will answer any of the most important purposes for which classification is needed. They would have no relation to the principles of therapeutics, nor would they aid us at all in taking a general and a comprehensive view of the subject.

Distinctions in pathology or symptomatology, may be made the basis of classification. But a symptom or pathological condition, may be obviated by widely different articles, or may require two or more articles that have no affinity with each other for its removal. Inflammation may require antiphlogistics at its outset, adenagics in its course, and tonics and narcotics at its close, according to the views of some at least ; so that classification upon such a basis would have less relation to the principles of therapeutics than might be supposed at first—a relation that would be only partial and constantly changing, even if the classes were coextensive with the symptoms or pathological conditions.

An arrangement like that of Dr. Tully's, based upon the operative effects of medicines themselves, independent of symptoms or pathological conditions, and this plan rigidly adhered to, is the only one that can be called scientific as applied to therapeutics, as it is the only one upon which the science or the art of therapeutics can be based, or that will have the true relation to its principles, which is the grand object of classification. And yet an arrangement upon some other basis, or even an alphabetical one, may have its uses, and may be retained in connection with, though not as auxiliary to a scientific one. Dr. Tully even adopts some of them in connection with his, and secures all the benefits they are calculated to confer.

Nor will an arrangement partly upon his plan, and partly upon some other, be materially better than those we have noticed, inasmuch as a deviation from his plan, even in a single instance, will introduce confusion into the whole system. Most of the plans heretofore proposed have been of this mixed character. Though most of the classes have been founded, like Dr. Tully's, upon the operative effects of medicines, yet as others have been founded upon symptoms or pathological conditions, or upon the parts of the system acted upon, these must of course include articles that clearly belong to the other classes, and that have no similarity in their operative effects, which makes confusion in the whole system.

It is scarcely less important that the nomenclature for the classes should be correct and appropriate, than that the plan of classification should be correct and rigidly adhered to. A few inappropriate names for the classes would derange the whole system. We have already seen the importance of appropriate names for the antiphlogistics and antisbestics, but it is no less important in all other cases. Names that are calculated or have any tendency to mislead, must confuse our ideas of the utility of the system and compromit its integrity.

To obtain any clear and comprehensive, or any just and practical views of materia medica, with its immense accumulation of facts, which are themselves but dimly perceived, while lying in such utter confusion without classification, a confusion that is scarcely mitigated by the partial, imperfect, and arbitrary arrangements heretofore proposed, a true, natural and philosophical classification is absolutely indispensable ; and it is one of the most interesting phenomena in physic, to see how the facts, multitudinous as they are, and heterogeneous as they seem, will arrange themselves in order, each taking its proper place, from which its comparative and true value and importance will be perceived, under the magic influence of such a classification. The entire subject, extensive as it is, can be taken in at a glance, its strong and its weak parts will be perceived, and we shall know how and where to apply our labors to strengthen and advance it. Incomprehensible and appalling to the student before, it is easily comprehended, and becomes attractive to him now; and independent of its practical utility, it will be pursued like other branches of natural history, as a means of mental elevation and improvement. The study of botany becomes delightful, in proportion as we become acquainted with its scientific arrangement, its wonderful adaptation to the ends and objects of classification, and to object to such a classification in materia medica, on the ground of innovations, would be conservatism in its most odious acceptation. To the student it will be something to effect such a change in the study of materia medica, but to the skeptical physician it will be more to establish its principles, and show its practical utility in a new and important light. If medicine is to be elevated above the various forms of quackery, and overshadow them, it must first be reduced to a science, and he who makes an attempt to do this, which is in any degree successful, is a benefactor. It is the scientific character of this work that should commend it to every scientific physician, and this alone is sufficient to commend it to the careful perusal of every medical student. No author is competent to master the whole subject or to treat of it satisfactorily in detail, till he has first systematized and arranged it, and upon true principles. The report upon American medical literature, submitted to the recent meeting of the A. M. A., referred to Dr. Tully's definitions as being far superior to any others. It seemed not to have occurred to the writer of that report, that the mind that could produce such clear, precise, and accurate definitions, must necessarily be the best adapted, to examine and discuss every topic belonging to his subject.

If the system here presented is not perfect in itself, an examination of it cannot fail of producing more just views of the utility and importance of classification, and the principles on which it should be founded. If the author has not attained the desired object, the importance of what he has attained, as a guide to those who may come after him, can scarcely be overestimated. To show that our own views of it are not peculiar, and in closing what we have to say upon it, we insert the following extract from a private letter, received from an aged physician, who has died since the work was published. Those who can appreciate science and philosophy in application to physic, can judge, from the extract itself, whether its suggestions are worthy of consideration.

"It is, of course, to be expected, we might almost say it is to be hoped, that Dr. Tully's views will meet, to a greater or less extent, with opposition. But it would be superfluous to enlarge upon a topic so obvious as that the interest, the value, and to a great extent, the usefulness of a new work on this subject, is not to be estimated by the proportion of its readers, who at once coincide with its most peculiar views. On the contrary, it is originality of thought, patient accuracy of investigation, and the extent and amount of the facts from which its inductions are drawn, which chiefly make such a work valuable. Above all, the immense accumulation of materials in the materia medica, increased as they are by valuable additions every year, must cause every one to feel the need of the simplifying effect of general views and comprehensive classifications.

"Some practitioners, and more especially, perhaps, many who are advanced in life, will object that 'we have for a long time had too large a number of remedial articles, rather than too few, that we should aim not to increase but to diminish their number; that, to borrow an illustration from the mechanical arts, practitioners would do well to employ with skill and accuracy a few good tools, rather than distract their minds with a large number.' But even granting the soundness of this advice, must we not look a step farther? In making our selection can we have too large a stock to select from, provided each article is carefully described under general views? Is it not obvious that the vexation of discordant and conflicting testimony and opinions, in regard to the operations and usefulness of articles, becomes a more serious evil in the case of a small number than of a large one? The greater the number investigated by an author, the more numerous are his advantages for relieving such embarrassments. The case is similar in that of arranging species in botany and other branches of natural history; every new species supplies a link in the chain of being, which remedies a deficiency, and leads to more satisfactory views of the relation existing among those previously known. As the branches of natural history become more extensive, a knowledge of them becomes also simpler, because the wider the basis for induction, the more simple as well as more comprehensive are the general views. Although the accumulation of facts in materia medica is already so burdensome, yet if a man appears, who has not shrunk from the necessary industry in accumulating and investigating, the more numerous the facts from which he draws his inferences, the more broad, comprehensive, simple, and satisfactory, and finally, the more practically useful will be the general laws which he attempts to establish. They will have a *primâ facie* probability as well as an agreeableness. This is precisely what Dr. Tully has essayed, and his is the first attempt so far as materia medica is concerned, to do this with a careful avoidance of merely hypothetical views, and with a rigid induction from facts proved by experience and observation."

The diligent student, in search for principles, should not be too much elated at the prospect we have opened to him. It would be well for the indolent if "the principles, on which the treatment of diseases is based," were "few and simple;" but he who is both an intelligent therapeutist and an intelligent pathologist, cannot view them so. They may be simple when fully comprehended, but they will be too numerous to be acquired without industry. The remark, that "the whole art of physic can be written upon half a sheet of paper," is worthy of the man whose library has been compared to a spado's harem.

Possibly it may turn out that this word principles, like the word stimulant, has been somewhat abused of late. It is exceedingly convenient and comprehensive, and is, therefore, liable to frequent use by those who do not stop to consider its exact signification. It is never worth while to cheat ourselves or others by the use of words which have the semblance of reasoning, but signify nothing. We have given our own understanding of it in its application to therapeutics. If it is not equivalent or nearly so to guides to the right use of medicines, or rules for the right use of medicines, its use should be abandoned till its true definition is given.

The importance of principles rightly understood no one doubts. If it is a Yankee's chief end to get something to sell, it should be a physician's chief end to get principles; but for a physician to be always talking in favor of principles, without himself knowing exactly how or where to get them, is about as wise as it would be for a Yankee to be daily counting his eggs, of the ages of which he is not exactly certain, to find the income he may reasonably expect from the sale of his chickens.

Art. IX.—*Clinical Reports from the Hospitals of New York; prepared for the* New York Journal of Medicine.

NEW YORK HOSPITAL.

Report of Surgical Practice.—1st Surgical Division. John Watson, M.D., Attending Surgeon. Reported by Robert Ray, M.D., late House-Surgeon.

Case 1. *Wound of the Liver.*—P. V., a strong and remarkably muscular man, aged 35, was admitted, having been fired at with a revolver, a few hours before, in a fight. On examination, two small round pistol-ball wounds were found, near each other, just above the crest of right ilium, which were supposed to be the points of entrance and of exit of the same ball; also a third similar wound between the cartilages of the 7th and 8th ribs, two inches to the left of median line. None of the tracks could be traced into the abdominal cavity, nor could the direction in which the balls were fired be ascertained. There were scarcely any evidences of shock to the system, and all went well until the second day, when there appeared a slight yellow tinge of the conjunctivæ and the skin. This rapidly increased, so that in a few days patient was intensely jaundiced, at the same time the abdomen became slightly tympanitic and tender on pressure, especially over region of the liver. At the end of a week, patient, for the first time, had a chill with moderate sweat; his pulse now ran up to 120 per minute, the chills recurred irregularly, his intellect became sluggish, and the discoloration of the tissues more intense and universal. Bowels constipated, but the stools normal in color. He thus gradually sank till the nineteenth day, when he died. The autopsy showed a sloughy track, an inch or more in diameter, passing directly through the liver from the point of entrance of the ball (just to the left of ensiform cartilage) to the lower surface of the right lobe, where the ball had doubtless emerged into the areolar tissue, behind the ascending colon, giving rise to an extensive abscess which had formed there, extending down into the pelvis. The gall bladder and the ducts, and also the remainder of the liver were healthy. The wounds in the side were separate from each other, and were both superficial.

Case 2. *Ranula.*—A. B., a middle-aged man, of light complexion, presented himself with a fluctuating tumor on each side of the frænum linguæ, about the size of a pigeon's egg, pushing the tongue up and to the right side. He had been treated once by puncture, but two years ago the tumors returned. A portion of the thin sack of each of the tumors was now removed by curved scissors, whereupon from each of them about ℥ss. of a very viscid yellow fluid, resembling the white of an egg, was evacuated.

Case 3. *Amputation at the shoulder joint.*—P. W., a middle-aged man, had his right arm completely torn off by machinery, a hand's breadth below the acromion. In about eight hours, reaction being established, patient was etherized, and the limb removed through the shoulder joint, by the circular method. The operation was borne well, but subsequently a great deal of constitutional disturbance showed itself, which, however, was due to nothing more than the formation of two abscesses (one on the thorax and the other over the scapula) which found ready means of discharging through the wound, only about two-thirds of which had united by adhesion. Suppuration gradually diminished, and without other untoward symptom patient was discharged on the forty-second day.

Case 4. *Atresia vaginæ—Vicarious menstruation.*—C. A., a well-developed young woman, 26 years old, was admitted; she says that from the age of 16 she has always had a great deal of pain at each of her menstrual periods, which, moreover, come on very irregularly—ordinarily every eight weeks, or so. At these times she has severe pain in back and hips, and in a hard tumor which has gradually grown, and can now be felt in right ovarian region. It is the size and shape of a large orange; on two occasions the skin over it has broken, and a small quantity of yellow fluid has been discharged. Her pains cease, and this tumor diminishes in size on the occurrence of a bloody discharge, lasting four or five days, which comes away with her urine. On examination, no trace whatever of the vagina is discovered, the walls of the bladder and rectum being in close contact. The space externally between the anus and urethra presents no depression. The urethra is so patulous as readily to admit the forefinger, which, on being passed into the bladder, detects a body posteriorly, about the size of the uterus, and in about the normal position of that organ. There is, however, no passage whatever leading to it. While in the hospital she had one of her menstrual turns, lasting four days, during which time her urine (over which she has complete control) was of a deep red color, doubtless from the admixture of blood.

Case 5. *Stricture of the rectum.*—C. A., aged 30, in good health, and the mother of two children, the youngest 6 years old, states that soon after the birth of the latter one, she noticed that her bowels gradually became sluggish; this increased, so that before long they did not move spontaneously more than once in a week, since which time she has habitually used injections. She suffers no pain except during the passage of fæces; has never received any injury in these parts. On examination, a membranous, annular constriction, not quite permitting the passage of the finger, is felt in the rectum, about two inches above the verge of the anus. There is no surrounding induration. This constriction was accordingly divided with a bistoury by a single incision, posteriorly. After a week the use of bougies was commenced, and in a month she went home free from all her trouble, the rectum readily admitting a full-sized instrument.

Case 6. *Webbed fingers.*—J. O., a man, aged 27, was admitted with the ring and middle fingers of each hand closely united by a thin web throughout the whole length; bones, etc., normal; deformity is congenital, and has never been interfered with. Patient was etherized, and the web entirely divided by a bistoury. The commissure at the root of the fingers was then closed by two small flaps (one palmar and one dorsal) consisting of the integument, which lies between the heads of the metacarpal bones, the transverse line of the palmar flap being in the line of the groove at the base of the fingers, that of the dorsal flap extending somewhat farther towards the points of the fingers, so as to bring the line of union toward the palm. The two flaps were then drawn into coaptation between the fingers, and retained there by sutures. The surface left on the side of the fingers by the retraction of the divided skin, was left to heal by granulation. The operation (which was performed at the same time on both hands) proved to be entirely successful. The flaps united without any intervening cicatrix, and thus completely isolating the fingers from each other, while the sides of the fingers granulated kindly, and were soon covered with new integument.

Case 7. *Necrosis of the tibia.*—J. G., a boy having a scrofulus aspect, aged 17, bruised his foot and leg sorely, without, however, breaking any bone or cutting the skin. He walked about for a day or two, but was then obliged to go to bed, owing to the supervention of severe pain and swelling of the foot and leg, with febrile reaction. The swelling rapidly increased, so that in a few days after his admission, numerous free incisions were made, giving exit to a large amount of pus, and allowing the tibia to be felt bare, though not rough, for almost its whole extent. During the next two months, suppuration was very copious, and hectic symptoms set in, rendering it necessary, at the end of that time, to remove the limb just below the knee. After this had been done, patient soon got well. On examining the limb, the ankle joint was found open, and the whole tibia, except its upper epiphysis, dead. The upper and lower extremities were covered with involucrum, and a thin layer of new bony tissue adhered to the anterior margin of tibia throughout its whole length. The periosteum separated from the internal aspect of the tibia was thickened by fibro-cartilage and lymph, and was continuous above and below with the new bone. Specimen preserved in the museum.

Case 8. *Compound fracture of thigh.*—J. B., a robust man, aged 30, was shot (as is supposed, by a musket ball), on 4th of July last. The wound was small, and situated on the upper third of the thigh on its outer side, and passing thence inwards toward the bone, which was fractured and somewhat comminuted at junction of upper and middle third. No ball found. The limb was put up with a long splint, and moderate extension made. Severe constitutional disturbance followed, and several large abscesses formed in the thigh, and were opened, and the discharge became profuse and exhausting. At the end of the second month an incision was made down upon the fracture by the surgeon then in attendance, and a small piece of necrosed bone, and a fragment of the bullet, were removed. Since then, the discharge has slowly been diminishing, and now, at times, ceases entirely. The whole limb, however, from the groin down to the toes, is swollen to twice its natural size, and is hard and brawny to the touch, so that the condition of the bone cannot be felt. Within the last two months patient's general condition has become very good, and at the same time union in the fracture has progressed, so that before long it will be quite firm.

Case 9. *Stab in the thorax—Empyema.*—D. L., aged 27, a man in good health, was stabbed with a shoemaker's knife in the left side, between 8th and 9th ribs, on a line with the axilla. On admission, he was but little prostrated, and the hemorrhage was moderate; it was soon checked by a compress. There were no signs of wound of the lung. Auscultation next morning revealed nothing abnormal, except a systolic click heard at the apex of the heart; this sound only lasted 24 hours. In four or five days more inflammation of the left pleura came on, in a subacute form, and resulted, in the course of a week, in the filling of the pleura with fluid, the left side being dull up to the second rib, and the apex of the heart being felt to beat under the right nipple. So urgent did the dyspnœa and his general symptoms now become, that a consultation was called on the propriety of evacuating the fluid by puncture. During the night, however, an opening took place spontaneously, and some two or three pints of fluid escaped in a stream from the wound. The discharge, which was at first serous, continued, and soon became purulent, while the dyspnœa was at once relieved, and the heart came back towards its normal position. After a long struggle (four months), with the exhaustive discharge from his chest, patient is now fully convalescent, suppuration having nearly ceased. His left side is of course very much contracted, but the heart is in its proper place, and the respiration is becoming more and more audible on the affected side.

BELLEVUE HOSPITAL.

Four Cases of Ligature of the Femoral Artery for Popliteal Aneurism.

Reported by J. J. Campbell, M.D., House-Surgeon.

Case 1.—C. Q., aged 40; robust constitution; slightly intemperate; admitted Oct. 19th for aneurism of the left popliteal artery. No hereditary disease traceable. About the first of August, he jumped from a height and sprained his ankle slightly. He continued his work after the accident, but had to give it up, in a few hours, on account of severe pain in his ankle. About the first of October following, he noticed a small tumor in the popliteal region of the left lower extremity. This tumor continued to enlarge, and pain him, until the 16th of the same month, when he lost the power of using the limb. About this time, he began to suffer from a tingling sensation in the anterior aspect of the leg, and in the sole of the foot.

When admitted, he had a large diffused swelling in the left popliteal space, which gave the usual signs of aneurism. When the circulation through the femoral artery was interrupted, the tumor collapsed; but when the compression was removed, it filled with a heaving sensation with each pulsation of the artery.

Oct. 21st.—A consultation was held, and ligature of the femoral artery advised. Dr. C. D. Smith tied the vessel in the lower part of of Scarpa's space, while the patient was under the influence of ether. During the evening, he was somewhat restless, and a grain of opium was given every hour until sleep was induced.

Oct. 22d.—The patient slept well last night. The temperature of the limb is good.

Oct. 25th.—The temperature of this limb is as good as that of the other. The tingling sensation complained of in the leg and foot, previous to the operation, still continues. The wound does not seem disposed to unite by first intention.

Oct. 30th.—The patient's health and spirits are good. The wound is healing by granulation.

Nov. 10th.—The ligature came away to-day with the dressings. About one-third of the wound is united, and the remainder is granulating nicely.

The patient was discharged cured in December.

Case 2.—A. S., aged 45; good constitution; intemperate; boatman by occupation; has always been healthy, with the exception of occasional attacks of rheumatism in his knees and ankles, for the past three years; no hereditary disease traceable. He has ossification of the radial arteries. On the first of May, 1857, he noticed for the first time a soft painless tumor about the size of a hen's egg in the left popliteal space. About a week after he first observed the aneurism, he attempted to go down stairs for the first time for several weeks, as he had just recovered from an attack of subacute rheumatism that had confined him to his bed, but found that he could not flex the leg well, on account of pain in the tumor, and stiffness of the knee.

June 9th.—The following measurements were made; viz., from the upper to the lower border of the tumor four and a half inches, and five and a half inches across; the circumference of the leg just below the lower margin of the patella was fourteen and a half inches, and a corresponding measurement of the opposite limb gave twelve and a half inches.

June 13th.—Compression of the femoral artery was commenced, but had to be given up on account of the great suffering it caused. Various attempts were made to carry out this plan of treatment without success, as the patient could not bear it, and it was finally abandoned June 24th. One fact noticed during this treatment was, that whenever the compression was let up, the patient complained of what he described to be streams of fire running in the course of the arteries for a few moments afterwards.

Sept. 26th.—Dr. Stephen Smith tied the femoral artery in the middle of Scarpa's space, while the patient was under the influence of ether. Before the ligature was tightened, it was noticed that the artery was ossified in small patches. As soon as the circulation through the femoral artery was arrested, all pulsation in the aneurism ceased immediately, and it shrunk to the size of a hen's egg. The pulse at the wrist became a little more frequent and fuller. The temperature of the foot and leg soon fell a few degrees below their normal standard. The limb was carefully wrapped up in blankets to keep it warm.

Case progressed favorably to the following date.

Oct. 22d.—The ligature came away this morning, 26th day. No pulsation in the tumor. The greater part of the wound has healed. Feels good in every respect.

March 3d.—The remains of the aneurism is quite soft and about the size of a pigeon's egg. He suffers a good deal from chronic rheumatic inflammation in the knee. It pains him severely to extend his leg upon his thigh. He is not able to get about the ward except on crutches.

Case 3.—T. M., aged 32; good constitution, and temperate in his habits; was admitted into the hospital, January 5th, 1858, for aneurism of the right popliteal artery. About five weeks previous to his admission, he began to suffer while walking from a pricking pain in the right popliteal space, and found, on examining the part, a soft tumor about the size of a hen's egg. On admission, a large diffused tumor was found, presenting the following symptoms; viz., softness, pulsation, thrill, bruit, and could be made much smaller by compressing the femoral artery. It caused him a great deal of pain, and as it was increasing rapidly in size, the pain was becoming almost intolerable, and could only be relieved by giving him on the average four grains of the sulphate of morphine in the twenty-four hours, and keeping the knee enveloped in cloths kept wet with a strong infusion of opium. The pain was about the tumor and down the leg, in the course of the peroneal nerve.

Jan. 16th.—Dr. James R. Wood tied the femoral artery in about the middle of Scarpa's space. The patient, although not under the influence of any anæsthetic, bore the operation remarkably well. The moment the ligature was tied, all pulsation in the tumor ceased, and it diminished fully one half in size, and the pulse at the wrist became a little more frequent and fuller.

Jan. 17th.—Pulse 88, full and strong, and his general condition is good. The wound looks well. Complains of some pain in the knee and outer side of the leg. No pulsation in the tumor, which is smaller and harder than it was yesterday. The leg is not as œdematous as it was previous to the operation, but the foot and ankle still remain swollen.

The temperature of the right foot 83° F., popliteal space 86°, and groin 89°.
" " " left " 82° " 92°, " 94°.

Jan. 18th.—Pulse 92 and full, and his general condition is good. Suffers but very little from pain. He says the outer side of his knee feels as if it were asleep. The wound looks well. No pulsation in the tumor. The foot and ankle still remain swollen.

The temperature of the right foot 84° F., popliteal space 88, and groin 96°.
“ “ “ left “ 86°, “ 94, “ 97°.

Jan. 19th.—Continues to do well. The foot and leg are perspiring freely. The foot is still œdematous.

The temperature of the right foot 92° F., popliteal space 94°, and groin 94°.
“ “ “ left “ 91° “ 96°, “ 96°.

Jan. 21st.—Pulse 104, soft and moderately full. Suffers from pain in the abdomen caused by not having his bowels moved since the opération. A large injection of tepid soapsuds was ordered. Foot and ankle still œdematous. No pulsation in the tumor.

The temperature of the right foot 93½° F., and popliteal space 94°.
“ “ “ left “ 92°, “ “ 92°.

Jan. 22d.—Pulse 100, and his general condition is good.

The temperature of the right foot 92° F., popliteal space 92°, and groin 96°.
“ “ “ left “ 89°, “ 94°, “ 95°.

Jan. 27th.—Continues doing well. The foot is nearly of its natural size.

The temperature of the right foot 92° F., popliteal space 97°, and groin 94°.
“ “ “ left “ 90°, “ 97°, “ 96°.

Jan. 29th.—Has been doing well since the last note was made. The ligature was removed to-day by Dr. Wood.

The temperature of the right foot 96° F., popliteal space 98°, and groin 95½°.
“ “ “ left “ 88°, “ 96°, “ 95½°.

Feb. 9th.—Commenced to sit up to-day. Wound all united, except at one small point, and there is no discharge from it. Complains of some stiffness in the knee, whenever he attempts to flex the leg. No pulsation in the tumor. There is no œdema of any part of the limb.

Feb. 20th.—He requested to be discharged to-day. The wound is entirely healed. The tumor is much smaller and softer. He cannot extend his leg fully on his thigh.

March 4th.—He called at the hospital, and says he is feeling well. The tumor is rapidly disappearing. There is still some stiffness about the knee, but not so much as to prevent him from walking about.

Case 4.—Ligature of the Femoral Artery, followed by Gangrene of the Leg and Thigh, terminating fatally. Reported by John M. Farrington, M.D., House-Surgeon to Bellevue Hospital.

J. R., aged 33, a man of large frame and robust appearance, of apparently good constitution, but intemperate habits, was admitted April 28th, for ulcers of the leg. There were three large ulcers on the anterior surface of the right leg, the edges were elevated and indurated, and their character was presumed to be due to constitutional syphilis, but the patient unqualifiedly denied its possibility. The patient had never been affected with cardiac or cerebral disease. Three months had elapsed since the first ulcer appeared, which was the result of an injury. Three days prior to his admission, in rubbing the leg to relieve the pain, caused by the ulcers, he accidentally discovered a small tumor in the popliteal region. The day after his admission, he called my attention to it. He said he knew no cause for it; he had never injured himself in that part, and had never been engaged in any vocation, or exercise, that in any way brought this region into special action. Examination revealed a tumor in the popliteal space, from two to three inches in length by one and a half in breadth, not much raised above the surface, firm, with strong equable pulsation, single bruit de souffle and pulsation alike perceptible to touch and sight. Circulation, and sensation of the limb beneath it, unimpaired. Pulse 80 and moderately full and strong. Cardiac and pulmonic sounds normal.

On the 8th of May, the condition of the ulcers was materially improved. They were of diminished size, and healthy in character. At 3 P.M., Dr. Jas. R. Wood applied a ligature to the femoral artery in Scarpa's space. Anesthetics (ether and chloroform) were administered; he came under their influence with great difficulty. His face became suffused and livid, and his respiration was suspended at one time. The tightening of the ligature was delayed until he came out partially from the effects of the ether. After the operation, the limb was enveloped in cotton batting, and bottles of hot water were placed about it. His pulse fell to 64, and was small and feeble. Stimulants were administered, and reaction soon came on. At 6 P.M. the limb was cold; he complained of a severe pain in the ulcers, and in the popliteal region. Ulcers pale and bloodless. Ordered the bottles of hot water renewed, and a hot air bath given, and morphia to be administered every hour.

11 P.M.—Pain has ceased. Limb moderately warm.

On the 9th observed a scar on the glans penis, and a cicatrix in each groin. He now acknowledged that he had primary syphilis 16 years previous, which was followed by constitutional symptoms. Pulse 80 full and moderately strong. Ulcers blackened as though from venous congestion. No pulsation in tumor. Whole limb warm to the touch, but the foot feels cold to the patient. No sensation below the ankle; above it is unimpaired. Temperature of right foot 82°; left 92°; right popliteal space 92°; left ditto; right thigh 90°; left ditto. Complained of pain in his bowels, and that they were constipated. An enema had been given previous to the operation, which brought away some scybalæ. Ordered a cathartic of calomel and jalap, and an enema of warm water and soap. During the day, the foot became sensitive, and he had some pain in the ulcers and popliteal space. At midnight, the pulse became more frequent, reaching 112, and febrile symptoms came on. Ordered 1 gr. of ipecac. every hour.

On the 10th, the pulse was the same as the evening previous. Tongue coated. The enema given yesterday was retained, and the cathartic powder vomited; no movement yet from the bowels. No pain in the limb. No discharge from the wound, which is apparently uniting by adhesion. Foot mottled, whole leg reddish color; surface of ulcers black and dry; tissues around them black and purple, and raised in blebs. Thigh and leg warm, but foot of lower temperature. No sensation in the foot, excepting beneath the toe-nails. The circulation in the foot is moderate. Position of limb upon a pillow; leg semi-flexed upon thigh, and whole limb lying upon its outer aspect. Towards evening, the pulse was 120, but less strong and full; stomach irritable. Ordered the ipecac. to be discontinued, the enema to be repeated, and gave three pil. cathart. comp. Sensation in foot is fair.

On the 11th pulse 116, moderately full and strong. Tongue still coated; full movement from the bowels, by the use of the enema last evening. Pills not yet operated; stomach still irritable; ordered the sub-nitrate of bismuth. Tenderness down the inner aspect of the thigh for upper half. Appearance of leg and ulcer little changed. Sensation in foot is much impaired. Whole limb perspiring. No pulsation in tumor, and no perceptible change in its size or density. Temperature of right foot 90°, left 92°; right ham 98°, left 96°; right thigh 92°, left ditto. Ulcers dressed with simple cerate. Suture removed from wound; it has united, excepting for a short distance, on either side of the ligature. Discharge moderate in amount. Ordered milk punch. As no movement, excepting from the lower bowels, had occurred, gave another cathartic of colocynth, hyosciamus and croton oil, which operated freely.

On the 12th, pulse 116 and feeble. Has eaten very little since the operation—merely an egg, two oysters, and a little beef-tea. The tenderness along the course of the vein, upon inner aspect of the thigh, increased in degree. Foot cold; circulation much diminished. The ulcers, and surrounding tissues, sloughing. A band of tissue, for 5 or 6 inches in breadth, and extending completely around the leg, is gangrenous. Dressed with oil of turpentine. Temperature sole of right foot 74°, of left 92°; of right ham 94°, left 92°; of right thigh 92°, left ditto. Ordered porter, and the milk punch continued.

13th A.M.—Not much increase in sloughing since last evening. Blebs have formed over each side of the ankle. Line of demarcation not formed. No sensation below the slough. Pulse 104, rather small and feeble. General condition as last night. Appetite better. Slough dressed with pulv. charcoal, creasote, and chloride of soda.

14th A.M.—Wound doing well. Tenderness of thigh much diminished; nothing new in his general condition, excepting that his face is more pallid and countenance more anxious. Whole leg has sloughed from just above malleoli to junctions of upper and middle third, interiorly and posteriorly, to junction of lower and middle third; tibia exposed; tendons of muscles dissected out. Whole foot purple. A line of demarcation appears to be forming.

15th A.M.—Has taken some beef-tea during the night, and has been slightly delirious. Foot black. Tendo Achilles sloughed off; in lower third of leg, nothing remains but the exposed bones, and a few tendons. Line of demarcation fully formed, and gangrenous portion sloughed off, quite up to it. The limb above is of normal temperature and appearance. Wound in thigh as yesterday, excepting the discharge is thin, and of an unhealthy character. Took a pint of beef-tea during the night. Tongue dry with yellowish coat. Pulse 140, small, quick, and compressible. Mental condition depressed, and has been since the day succeeding the operation. No delirium. Has passed no urine since yesterday evening. Passed the catheter, and drew off nearly two pints of high colored urine. The patient has complained since admission, and for months previously, of pains in the lumbar region over the kidneys; at times the pain is very severe, causing him to keep in a semi-erect posture, as the supine position aggravates the pain. Examination of the urine showed only the presence of urates.

P.M.—Dr. Wood sawed through the tibia and fibula in the middle third, thus getting rid of the stench of the decomposing foot. The complete removal of the gangrenous portion of the leg, was left to await the further action of nature. At midnight found him raving, and struggling in the hands of his attendants; delirium came on suddenly, and continued but a few moments; he was soon soothed into quiet by gentle persuasion.

16th A.M.—No more delirium. Pulse 132 and feeble; subsultus tendinum; bowels free, and tongue moist and less coated. Gangrene extending slightly on outer aspect of leg, but not elsewhere; wound as yesterday. Has taken one grain of opium, every hour, for the past two days, and during the night it was increased to two grains per hour. Stimulants and nourishment are given as freely as the patient can be induced to take them. Has slept some during the night.

P.M.—Mild delirium. Pulse 140, very quick, and moderately full. Subsultus tendinum, and picking at the bed-clothes. The gangrene has extended over a space as large as the hand on the outer side of the leg, not extended perceptibly in front nor upon inner aspect, but tissue red and of increased temperature.

17th A.M.—Delirium most of the time. Bowels move involuntarily; tongue coated, but moist. The symptoms of yesterday continue, but are aggravated in their character. Gave two grains of opium, and two ounces of brandy, every hour, with beef-tea. Gangrene is extending upwards all around the limb, but mostly upon its outer aspect, where it is quite up to the knee-joint. With exception of a small patch in front, the whole of the stump below the articulation is involved to a greater or less extent.

18th A.M.—Pulse 150 and very feeble; face and extremities cold; passed urine once involuntarily. Has taken stimulants regularly through the night. Gangrene much extended; nearly whole stump below the knee is blackened. Popliteal space, both below and above the knee, deep purple, not extended so much upon outer aspect of thigh as on inner; it has gone up at least 4 or 5 inches during the last 3 or 4 hours; the inner side of thigh is reddened for some distance higher.

P.M.—Pulse very frequent and feeble; cannot be counted. The whole thigh is swollen, tense and reddish. Has slept a considerable time. Retains the stimulants and beef-tea. The stump has been dressed twice daily, since the commencement of the gangrene, with charcoal, creasote and chloride of soda, with which it is kept saturated. A large bleb has formed on the inner side of the thigh, over the point that was blackened this morning. Gangrene has extended over and above the popliteal region; and the whole thigh, as far up as the upper margin of the wound, is swollen and very tense. Pulse still more feeble.

19th.—His condition continued to grow worse, and he gradually sank and died.

Permission to make a post-mortem examination of the body was not obtained until 41 hours after death. The body was then found so much decomposed, that no examination could be made. The tissues were softened and full of gases, and the face was as black as the gangrenous limb.

Report of Five Cases of Trephining. Reported by J. J. CAMPBELL, M.D., House-Surgeon.

Case 1.—A. E., aged 32; robust constitution; was admitted at 1 A.M., Oct. 17th, for fracture of the skull caused an hour previous by a blow with a cart-rung. He presented the following symptoms, viz.: Coma, perfect insensibility, respiration 12 and stertorous, pulse 60, full and soft; both pupils dilated, and the right iris insensible to light, while the left was not. On the left frontal protuberance there was a large, soft, livid swelling that fluctuated, and through which a fracture, with depression of bone, could be made out.

7 A.M.—No signs of returning consciousness; respiration a little more stertorous; pulse 58, full and soft; surface warm, and passes his urine involuntarily. The patient was seen by Dr. C. D. Smith, who ordered a stimulating injection. The patient was seen soon after this, and his pulse found to be 60, smaller and weaker, and his respiration 34 and stertorous.

At 9.30 A.M. it was evident that the compression was increasing, as the symptoms were becoming more marked, and it was deemed advisable to trephine, without further delay. On cutting through the scalp, portions of the frontal, parietal, and temporal bones were found extensively comminuted. When the button of bone was taken out, the depressed pieces were elevated, and many of them removed. A large quantity of extravasated blood was found dissecting the dura-mater extensively from the bone. The fracture was ascertained to run through the frontal bone to the orbit, leaving a piece of bone loose in the roof of the orbit. As this piece was not causing any compression, it was not disturbed. The blood was scooped out. The middle meningeal artery was bleeding freely, but the flow of blood was arrested by the application of cold and pressure. During the operation the breathing became less stertorous, but it did not remain so long. His pulse became very frequent (160) and feeble. Stimulants were introduced into his stomach and rectum. He continued to sink until 1 P.M., when he died. On post-mortem examination, a large clot, nearly a half inch in thickness, separated the greater part of dura-mater, covering the left hemisphere of the brain from the skull. A wound one and a half inches in length was found in the dura-mater, opposite the parietal boss. Just under this opening the brain was discovered to be lacerated and covered with extravasated blood. No clots found in the substance of the brain. The skull was broken into thirteen loose fragments, including those previously removed.

Case 2.—R. M. H., aged 30, was admitted at 10 30 A.M., Oct. 21st, suffering from compression of the brain, caused by falling down a flight of stairs and striking on the left side of the head. It was stated by those who were with her, previous to her admission, that she bled nearly a quart from the left ear. They no doubt not only exaggerated the amount, but were deceived as to its source. There was some hemorrhage from the ear, but there was much more from a scalp wound above and behind the ear.

When brought into the ward she presented the following symptoms, namely: Surface natural, breathing nearly natural, and occasionally a little stertorous; pulse feeble and infrequent, and left pupil dilated and insensible to light. She was restless, and tossed her arms about a great deal. As her pulse soon began to grow very feeble and frequent, a tablespoonful of brandy, with five grains of carbonate of ammonia, was given every fifteen minutes, until five doses had been taken. The pulse had improved in the meantime, and the stimulants stopped, unless internal hemorrhage should be induced. The pulse soon began to flag again until it could no longer be felt at the wrist. The respiration became a little stertorous. All the other symptoms remained about the same as they were when she was admitted. Stimulants were again tried, and with the same effect.

1 P.M.—The left pupil was a little more dilated and insensible to light. A consultation was held, and trephining advised, and the operation performed by Dr. C. D. Smith. The wound in the scalp was enlarged, and another one made, crossing it at right angles. On dissecting up the flaps a fracture of the parietal bone was discovered, but there was no depression of bone. As soon as the button of bone was removed, a mass of coagulated blood sprung up in the opening. After scooping out all the clots that could be reached, it was ascertained that the ruptured vessel (probably the middle meningeal artery) was still bleeding and very difficult to manage. Attempts were made to check it with compression, but without effect; but as the hemorrhage was not very severe, and as the pulse was good, it was allowed to continue. While the extravasated blood was being removed, the left pupil began to contract, and became sensible to the light; but this was not of long duration, for symptoms of compression soon began again to declare themselves. A turpentine enema and sinapisms to the feet were ordered for their revulsive effect.

9, P.M.—Pulse from 78 to 80; moderately full and strong; respiration from 26 to 28, and irregular, and pupils not so widely dilated, but still insensible to light. With the exception of the feet the surface was warm

11.15, P.M.—Pulse 95, full and strong; respiration easy, and from 28 to 30, and pupils not so widely dilated. Evaporating lotions were kept applied to the head.

Died Oct. 22d, at half-past four, A.M.

Autopsy.—Extensive bloody infiltration under the temporal muscle.

A fissure was found in the squamous portion of the temporal bone, one and a half inches above, and three quarters of an inch anterior to the meatus, running into the petrous portion of the bone. A large clot of blood, an inch in thickness, was discovered, extending from the coronal to the lambdoidal suture. The middle meningeal artery was ascertained to be ruptured.

Case 3.—J. S., aged 33, was admitted into the hospital at 3 p. m., June 18th, suffering from compression of the brain. The following history was given by his wife. He has always enjoyed good health, and has been temperate in his habits. Five years and a half ago an ulcer formed, from what was supposed to be a boil on the left leg. Two years and a half subsequently, this "sore" was "dried up." Four months later, he was seized with a "fit," that lasted an hour before he became sensible again. The convulsion or fit occurred only once every year since. He has suffered constantly from pain in his head, with an inclination to sleep a great deal for the past two years. Last fall, a soft fluctuating tumor, of the same color as the surrounding skin at first, formed on his forehead, a little to the left of the mesian line, and soon afterwards inflamed, opened, and became a running ulcer. It has been in this state for the last six months. During the past week he has been in a stupid condition, and answered questions with great reluctance. Since the day before yesterday he has neither spoken nor taken any nourishment. He also has had difficulty in swallowing for the same period. His bowels have not been moved for a week past.

When he was brought into the hospital he presented the following symptoms, viz. : complete loss of consciousness, pulse slow and full ; respiration stertorous, skin moist, tongue heavily coated, with a brown crust, sordes on the teeth and lips, and eyelids closed. At the bottom of the ulcer, the frontal bone could be seen, white, and denuded of its periosteum. The cicatrix of the old ulcer on his leg, is about an inch above the outer malleolus. No cicatrices of either chancres or buboes, can be discovered on his person.

Dr. James R. Wood was present when the patient was admitted, and trephined him immediately, in a sound portion of bone. On removing the bone, from three to four ounces of thick pus escaped, which was followed by a serous fluid. Through the opening, made by the removal of the dead bone, the operator passed his little finger its whole length into the abscess, which appeared to run into the left lateral ventricle of the brain. The sac of the abscess was very distinct. Immediately after the discharge of the pus, the patient rallied ; his pulse became more frequent and smaller, his breathing lost its stertorous character, and his consciousness returned. He continued improving, and the next morning could answer correctly all the questions put to him, and would put out his tongue when asked to do so. There is some discharge from the opening. On the following morning, he was worse. His pulse ranged from 94 to 112, and his respirations were 30 in the minute ; will neither protrude his tongue when asked, nor answer any questions put to him. He continued to fail until 12 m. the following day, when he died. He lived nearly sixty-nine hours after the operation.

Autopsy.—Three inches square of the frontal bone was found dead. On the left hemisphere, at a point corresponding with, and attached to this dead bone, was a ring of old false membrane, two inches and a half in diameter, and about half an inch in thickness, connected with the edges of the abscess, which involved the left lateral ventricle. The diameter of the abscess was one inch, and its length four inches. There was a considerable quantity of false membrane found at the base of the brain, which was otherwise healthy.

The lower lobe of the left lung was passing from the second into the third stage of pneumonia. All the other organs normal.

Case 4.—B., about 35 years of age, good constitution, was admitted into the hospital at 6.45 P. M. June 2d, 1857, suffering from compression of the brain, caused an hour before, by falling three stories, and striking his head against one of the beams in the lower floor. When admitted, he was perfectly comatose; pulse 120, full, and soft; respiration 32, and stertorous, loud mucous rattle in his trachea; both pupils dilated, and insensible to light; the right was more dilated than the left. Just above and behind the left ear, a depression was felt. There was pretty free hemorrhage from the left ear.

7.30, P. M.—Respiration 42, and stertorous. The hemorrhage from the ear still continues. He moves the left upper and lower extremities freely; he also moves the right arm occasionally; but he has not been observed to move the right leg, although all his movements have been closely watched.

9, P.M.—Pulse 96, full, and soft; respiration spasmodic at times. Loud rattles in his throat, caused, probably, by blood flowing into the larynx and trachea. He coughs occasionally. The right pupil is contracted, and the left is dilated.

10.10, P.M.—Dr. Stephen Smith trephined the skull, and removed several large pieces of bone that were loose. He scooped out over four ounces of clotted blood, that lay between the dura mater and the bone. The lips of the wound were then loosely approximated, and dressed with cold water dressing. Some hemorrhage occurred from the wound after it was dressed. The pulse, after the operation, was 122, and weak, and the respiration 39, and irregular. The pupils nearly the same in size, and insensible to light.

10.30, P.M.—A turpentine injection was given.

11.20, P. M.—Pulse 116, moderately full and quick; respiration 43, and deep; the rattle in his throat is very loud, and he coughs some.

12.30, P.M.—He died. For about five minutes before his death, blood welled up out of his mouth at each attempt at expiration. His pulse was almost imperceptible for some time. His respiration became very slow for about an hour previous to his death.

Autopsy.—It was found that the dura mater was very extensively separated from the bone. The pieces of bone removed, were portions of the parietal and occipital. The opening made was about four square inches in extent. It could not be positively determined, whether the base of the skull was injured, as the friends would not allow any more extensive examination.

Case 5.—J. McD., aged 30; good constitution, and intemperate in his habits; was admitted at 9.30 A.M. Oct. 20th, 1857, suffering from compression of the brain, following a severe blow with a cart-rung on the previous evening. After receiving the blow, he fell down insensible, and has remained so ever since. He has had no medical or surgical attendance, but was allowed to remain in a cold entry-way until his removal to the hospital. On admission, he presented the following symptoms, viz. pulse 68, full and quick, respiration 23, and deep; both pupils dilated, the left more than the right, and both insensible to light, and his surface was warm and inclined to perspire. There was a contused scalp wound nearly over the upper and anterior portion of the right parietal bone. On probing this wound, a fracture with slight depression was discovered. It was reported by those who came with him, that he bled a great deal from this wound. Cold water dressings were applied locally. About a quart of urine was drawn by the catheter from his bladder.

10 A.M.—Pulse 60 and full, and his respiration deep, stertorous, and irregular. His breathing most of the time is like that of a person who is deeply narcotized. Both pupils alike moderately dilated, and extremely sluggish to strong light.

12 M.—Pulse 68, and of the same force, etc., and respiration 32 and heavy. All the other symptoms the same as at last note.

3 P.M—Dr. C. D. Smith trephined the right parietal bone just anterior to the ascending branch of the middle meningeal artery. The dura mater was ascertained to be very extensively separated from the bone by effused blood, several ounces of which were removed; but there was still some remaining. There was free hemorrhage from the wound for some time after the operation; but it finally ceased of its own accord. The depressed portion of bone was elevated, and the wound dressed with cold water dressing. The pulse became feeble, 130, and the respiration 44. He continued perfectly insensible. The right pupil was a little more dilated than the left.

5.20 P.M.—Pulse 96 and very feeble, and his respiration nearly 60. The right pupil continues more dilated than the left. Remains perfectly insensible; some brandy and water given. An injection containing brandy was thrown up his rectum.

7 P.M.—Is moribund. His pulse is so feeble that it cannot be counted, and his respiration is 48 and hurried. The right pupil still more dilated than the left. No sign of consciousness. His bowels moved freely in the bed. He has not moved any part of his body since the operation.

8.15 P M.—He died.

Autopsy.—No marks of external injury except a contused scalp wound, an inch and a half long, over the seat of fracture. Blood was found infiltrated in the cellular tissue of the scalp, and between it and the pericranium. The fracture in the parietal bone was a little over an inch in length. On removing the calvarium, a large clot of blood, external to the dura mater, was found, extending laterally under the frontal, parietal and occipital bones five and a half inches, and from the sagittal suture downwards to the base of the skull five inches. It was from a half to three quarters of an inch in thickness. It occupied the whole of the anterior portion of the middle fossa of the skull. The dura mater was not ruptured at any point. The anterior branch of the middle meningeal artery was found ruptured nearly an inch from the main trunk by a sharp edge of the fractured bone, which extended into the groove for the vessel The right hemisphere was very much compressed, and flattened. The convolutions were nearly all effaced. The anterior portion of the middle lobe was so compressed, as to be scarcely recognizable. There was no extravasation within the dura mater.

The liver was somewhat fatty. All the other organs were healthy.

Two Cases of Trephining. Reported by J. M. Farrington, M.D., House-Surgeon of Bellevue Hospital.

Case 1.—P. G., aged 51, was admitted to hospital, March 20th, with fracture of the skull, caused by a blow from a stone thrown at him, which struck him upon the left parietal bone, near its posterior superior angle. There was a fracture and indentation of the skull at the point, to the extent of an inch in length, and a quarter of an inch in width. He stated that he was stunned by the blow, and remained unconscious for more than an hour; and on the return of his consciousness, he found there was entire paralysis of motion of the right arm, and this existed at the time of his admission. The pupils were normal; the tongue, when protruded, pointed slightly toward the right side; pulse normal; mental condition rather dull. On the 21st, the operation of trephining was performed by Dr. Charles D. Smith. His condition at the time of the operation was the same as on the day previous. He complained of slight pain in his head. The depressed portion of bone was elevated, and removed. The dura mater was found to be lacerated, and a considerable hemorrhage came from it, which was controlled by a compress of lint.

Nothing noteworthy occurred until the morning of the 25th, when, on dressing his head, a portion of the brain substance was noticed protruding from an open point in the dura mater. This continued to increase in size. It was treated by a compress of lint, laid over it, and the flaps of the scalp drawn over the compress, and retained by strips of adhesive plaster and a roller bandage.

His condition gradually grew more feeble, paralysis of the arm continued, and paralysis of the right leg came on.

The fungus, which eventually became quite large, was by a uniform and constant compress, kept down, and the scalp was allowed to unite over it, while compression was applied over the scalp. The mental dullness became no better, and he passed his food and urine involuntarily; but on the 8th of April he grew better. His appetite improved, and the paralysis was less marked. His condition seemed gradually to grow more and more favorable, until about the 8th of May, when he again began to grow worse. On the 17th of May, he had a severe chill, and this was followed by others. He subsequently had phlebitis of the right leg, from purulent absorption. This was relieved by treatment.

The wound of the scalp closed, and the compress was left off, as the hernia cerebri was entirely relieved.

Paralysis of the right arm and leg complete. His condition continued low, and he gradually sank, and died on the 7th of August.

His death was preceded by convulsions, and he died comatose. Several days before death, a puffy tumor formed at the side of the hernia; this would be elevated at times, and depressed at others, and was inflamed by coughing.

Autopsy.—The brain and calvarium were removed together, and the brain examined from the base upward. On cutting into the third ventricle, on the left side, pus issued, and it was found filled with it. This was the base of an abscess, which extended upward and outward, to the point of fracture. The abscess was lined throughout its entire extent with a pyogenic membrane. The capacity of the sac, which was filled with pus, was about two fluid ounces.

The femoral vein was found to be perfectly occluded throughout its whole length.

Case 2.—J. R., aged 25, was admitted to hospital June 6th, with fracture of the skull, caused by the falling of a brick upon his head. The blow prostrated him, and he fell while in a state of unconsciousness from the first floor into the basement. He remained insensible for several minutes. Soon after admission, he had a convulsion; he had no paralysis, and no other symptoms of compression. Examination revealed a large depressed fracture of the postero-superior portion of the right parietal bone. Both tables of the skull were depressed over an extensive surface, and this surface was bounded by the irregular fractured border of the external table, while the internal table was broken under it for a considerable distance on all sides, and projected beneath it for the distance of from half an inch to an inch in a shelving manner.

Trephining was performed by Dr. James R. Wood, about fifteen minutes after admission. The depressed bone was elevated and removed; the pieces of the internal table, which projected beneath, as above described, were with difficulty separated from their attachment to the external table. They were all removed by a strong pair of duck-bill forceps. The clots of blood were removed, and the membranes were found to be uninjured. The usual treatment of rest, quiet, refrigerant drinks, attention to the bowels, etc., were observed, and the patient rapidly recovered without the supervention of an unfavorable symptom.

[To the foregoing cases, we will add the following cases of trephining, which have been handed us for publication.—ED. N. Y. JOURN. MED.]

Report of a Case of Trephining, followed by Necrosis, and ultimately, complete Closure of the Orifice by Bone. By M. E. WINCHELL, M.D.

I was called, April 25, 1857, to see a girl, 13 years of age, who, half an hour previous, had been hit on the head by an axe, thrown from a window of the fourth story.

Found her lying on the floor, where she had been placed, nearly helpless; extremities cold, natural intelligence considerably dulled, pupils slightly dilated, and partially sensitive, with rigors and a strong tendency to sleep.

There was a compound fracture of the cranium, with depression of bone, about half an inch to the left of the medium line, and parallel with it, three quarters of an inch in width, and three inches in length, traversing the occipito-parietal suture, and commencing two inches anterior, and terminating one inch posterior to the suture.

On removing the patient to a bed, discovered partial hemiplegia of the right side, with entire loss of locomotive power in the corresponding leg. Dressed the wound, and ordered an aperient.

On the third day, there was some pain over the left orbit, with no abatement of paralytic symptoms, although the mind was perfectly clear and pupils natural.

Fifth day; intense persistent pain over the left orbit, considerable cerebral irritation, with general nervous prostration, and continued paralysis.

April 30.—Assisted by my friends, Drs. McAllister and Church, after the patient had been anesthetized, I inserted the trephine in the occiput, just anterior to, and at the left of the posterior angle of the depression, and removed one half of the depressed bone, consisting of a single piece, three inches in length, and three eighths of an inch in width, and elevated the corresponding half, which had not been completely detached. Found quite a large blood-clot, but no apparent lesion of the dura mater.

First day after the operation, patient was comfortable, with no pain, and but little interruption in walking. Pain commenced on the second day, and gradually increased till the fifth, when, on being hastily summoned, I found my patient in a low state of nervous prostration, and suffering from purulent absorption. Pulse almost imperceptible at wrist, extremities cool, respiration irregular, much jactitation, and some delirium.

Free incisions for the escape of pus, which was almost incredibly profuse, local antiphlogistic remedies, stimulants and nutritives, resulted in reaction, after a few hours of unremitting diligence; from which time she slowly but steadily improved, till her entire recovery.

On the tenth day, pain and paralysis had entirely disappeared, although the secretion of pus continued apparently undiminished. Most of the surgical scalp wound united by first intention, but the original wound and point over the bony opening, made by the trephine, remained unclosed.

Eighteenth day, strength and appetite pretty good, and considerable discharge of healthy pus.

Twentieth day, suppuration diminished, but yet abundant. Walks freely, and suffers but little inconvenience.

June 1st.—Scalp wounds uniting, pulsations of brain distinctly visible.

July 1st.—Some discharge of pus, continuous pain on making much exertion, easily fatigued.

Aug. 1st.—Discharge continues in diminished quantity, no inconvenience from the operation.

Sept. 1st.—Pulsations of brain no longer visible, but can be felt; parts becoming firm, some pus from surgical wound, pain after much exertion.

Sept. 15.—A point of bone appeared in the opening, which had allowed the escape of pus up to this time, immediately above the external lateral margin of the incision, made by the trephine, which proved to be the semi-circumference of this incision, of the thickness of the occiput at this point, and about one quarter of an inch deep, smooth on the concave surface as left by the saw, and jagged on the convex surface. Subsequently, several smaller pieces came away, bearing marks, indicating them to have come from the immediate neighborhood of the first. Suppuration continued till the first of October, about which time the last piece escaped.

During this extended period of suppuration, the health of the girl was fair, but not robust. In December following, her menses appeared for the first time. Being of a nervous organization, she had subsequently two slight attacks of hysteria. With this exception. her health has been since December unexceptionable. The scalp presents a slight depression in the site of the original wound, but is firm at every point on pressure.

The history of this case does not deviate materially from that of most cases of this class ; but while it contributes its quota of ordinary facts to this branch of surgery, there is one that claims especial attention. That is, the escape of bone, between four and five months after the operation, considered in connection with the uniformly good health of the patient, the character of the bone, and the section from which it came.

Had the bone detached at the time the injury was inflicted, or only fractured, so that it ultimately became detached, and thus made its escape, or had it resulted from disease of the cranium, there would have been nothing remarkable about it. But when the operation was performed, the wound was thoroughly searched, and no fractured portion allowed to remain beneath the scalp ; indeed, that half of the depressed portion which did remain, had been simply bent down, and not fractured. The character of the bone itself, shows clearly, that it came from a portion of the cranium, which was sound and healthy at the time of the operation, and remote from the injury.

We are forced to the conclusion, that necrosis must have been established in healthy bone, and removed in the short space of five months, and new bone subsequently replaced, for the arch of the cranium is now entire ; and, as there was no evidence of inherent disease, that this disorganization of bone was brought about by the action of pus, which either burrowed beneath the calvarium to that point, or was a product of inflammation immediately subjacent.

I am not aware that a case, precisely of this description, has ever been reported; if so, it has escaped my observation.

2 Boorman Place, West 33d St.

Fracture of the Skull, with Depression—Trephining—Recovery. By J. Q. ADAMS, of Carmel, Putnam Co., N. Y. Reported by LEVI WARREN, M.D., House-Physician, Bellevue Hospital.

On June 29th, I was called to visit Mrs. Willit, aged 48, a colored woman. Upon my arrival, I found her reclining in an arm-chair, supported by several attendants, and covered with blood. She was talking incoherently concerning her head ; appeared to be confused, looked wildly about the room, and was extremely restless if questioned or disturbed, but if left alone was disposed to be quiet. There was no coma, no vomiting or nausea; the pulse was somewhat accelerated, but regular; her intellect did not appear to be affected, except the memory, which had now become so deficient, that she could not remember the name of her most intimate friend.

Upon examination, I found a large contused and lacerated wound of the scalp, on the forehead just above the right superciliary ridge, inflicted by some blunt instrument. I also found another upon the lateral and posterior portion of the head, making an incision three inches in length, going through the scalp directly down upon the posterior inferior angle of the left parietal bone, which was extensively fractured, much comminuted and depressed, being of an irregular and somewhat triangular shape. The depressed portion extended obliquely under the surrounding and unfractured parts, in such a manner as to render it impossible to elevate it without the aid of the saw.

It was found necessary, in order to elevate nicely the depressed parts, to make three applications of a small trephine. Upon removing these discs and a piece of the depressed portion, it was found that splinters of bone had pierced the meninges, and entered the substance of the brain. Upon elevating the posterior and inferior angle of the parietal bone, having the depression of the lateral sinus, venous blood gushed forth freely, but soon abated, and ceased altogether in a few hours. The ordinary dressings applied. I saw her again late in the evening; she had slept a little during the day; consciousness seemed somewhat impaired: she was rather drowsy, but easily roused, and would not answer questions addressed to her; she appeared to be insensible of her injury; there was no nausea; the bowels were quiet; pulse 52 per minute, and natural; ordered a laxative.

Tuesday, July 1st.—Patient slept at short intervals during the night. Her pulse is 60; skin hot and dry; tongue coated. Her mind appears much confused. She does not know that she has been injured; puts her hand to the head, and complains of a little pain; prefers the sitting posture. Bowels were moved by the laxative given yesterday. Wound looks very well. Ordered strict regimen and perfect quietude, and left her for the night.

July 2d.—She appears better, and is conscious that she has been injured; but has no recollection of what has transpired. Slept very well during the night, and had a few short naps through the day. Her pulse is 70; skin slightly moist; tongue a little coated. Ordered a seidlitz powder.

July 4th.—She is quite restless and impatient to day; complains of fatigue, and appears depressed in her mind. Pulse 120, feeble, with a hot and dry skin; tongue still coated, but moist. She complains of much thirst. Bowels moved once during the day.

July 5th.—Parietal wound discharging freely. The incision for the operation has united; pulse 100, quite full and strong.

July 9th.—Patient appears very much better, walks about the room a part of the time.

August 5th.—She is quite well, and has resumed her ordinary avocations and habits.

CRITICAL ANALYSIS.

Art. X.—*Human Histology in its relations to Descriptive Anatomy, Physiology, and Pathology.* With 434 illustrations on wood. By E. R. Peaslee, A.M., M.D., Professor of Physiology and Pathology in the New York Medical College; of Anatomy in Dartmouth College; and of Surgery in the Medical School of Maine, etc., etc. Philadelphia: Blanchard & Lea, 1857. 8vo. pp. 618.

After the appearance of such very complete works as those of Kölliker and Bowman on fundamental Anatomy, with the elaborate and profound treatises of Robin and Verdeil, and Lehmann on zoöchemistry, in our medical libraries, the preparation of such a volume as this of Prof. Peaslee's might seem to be a work of supererogation for the cause of science. But none so well as an instructor in these important departments of learning can appreciate and supply the wants of a class of students who require that text-books should present a classified and condensed arrangement of the vast stores of elementary facts which modern scientific researches have accumulated. This desirable object has been happily accomplished in the work before us, so far as the facts relating to the elementary and proximate constituents of the human organism are concerned.

The volume is admirably designed to supply the necessities of not only junior students, but physicians and all classes of scholars who have occasion to refer to the highest authorities on the subjects of which this work treats. Though exceedingly compendious and condensed, this treatise will be found sufficiently elaborate for the ordinary wants of students and professional men. Its illustrations are from the best authorities and are well executed. They impart peculiar value to the work, and do great credit to the publishers.

In his preface, the author states that the plan of the work was formed nine years ago; and he truly remarks that notwithstanding there have since appeared several works upon the subjects embraced in it, none of them have included its entire aim, viz.:

"1. *To give a connected view of the simple chemical elements, of the immediate principles, the simple structural elements, and the proper tissues, entering into the composition of the fluids and the solids of the human body.*

"2. *To associate with the structural elements, and the tissues, their function while in health, and the changes they undergo in disease.*"

This plan has been carried out in a most practical manner by Dr.

Peaslee, and in a mode which experience has proved most advantageous both in imparting and retaining knowledge on these subjects. The great synthetic expressions and phenomena of nature in the human organism are studied in connection with the analysis of the proximate and the ultimate elements and principles which enter into the constitution of the body.

After a few pages devoted to the separate consideration of the several chemical elements that enter into the composition of the animal tissues, the author proceeds to a very careful investigation of the various immediate or proximate principles of which the human body is constituted. The classification that he makes of those proximate elements is exceedingly simple and natural. The chapters relating to the elementary principles, proximate and ultimate, comprise the first hundred pages of the volume.

The second part of the work consists of three divisions, containing:

"1. *A description of the simple histological elements, their distribution, development, etc.*
"2. *Of the fluids in the human body which contain histological elements.*
"3. *Of the tissues, properly so called.*"

The first division is, of course, principally devoted to the history of cell-life, and the development of the various tissues. The essential facts in cytology are stated with great clearness, and the text is profusely illustrated with well executed drawings. The illustrations and remarks respecting the essential and morphological characteristics of cancerous growths are eminently clear and practical.

It is an interesting fact that the study of the microscopical characteristics of pathological or abnormal structures and tissues has been the most fruitful source of advanced and corrected views respecting the intimate structure of normal tissues. We believe it was affirmed by the brilliant but lamented Dr. W. J. Burnett, that the most correct view of the nature and origin of cells has been derived from the careful study of the development and structure of morbid growths, and that, *because* they are *infra-formations* associated with higher and normal tissues.

So it is,—the laws of life and health are often most successfully learned from the observation and study of diseased conditions; and, not unfrequently are modes and means of cure suggested by the phenomena and events of disease in its incurable stages, and sometimes indicated indeed by the revelations of the cadaver itself. It is also worthy of remark, that by the chemical and microscopical study of the products of *dis-assimilation* we are often able to throw a flood of light upon some of the most occult phenomena of both diseased and healthy vital functions. Those who lightly esteem the practical importance of histological and pathological studies certainly fail to perceive the most essential grounds of progress in the healing art. Those forms and processes of organic life that are most deeply hidden are generally the most practically important; and the more closely we interrogate nature, the greater becomes the necessity, and the greater the opportunity for enlarged, philosophical, and practically useful generalizations and deductions from the elementary truths so brought to light.

These ideas are suggested, and aptly illustrated, by the history of cytology, as a department of histological knowledge, in its physiological and pathological relations. The rude glasses of Malpighi, Leeuwenhoek, and Hewson, served to make known a tolerably correct knowledge of the morphological elements of the circulating fluids ; but the hasty deductions of the medical philosophers of that day, resulted only in fanciful theories like that of the *error loci*, etc. In our own times, with perfected instruments and careful analysis, the microscopical observations of Wagner, Purkinje, Schleiden, and Valentin, supplied the reliable data from which the philosophical mind of Schwann was enabled to invoke the true philosophy of cell-life, in its relations to the growth, and the metamorphoses of the animal tissues. Assuming the nucleated cell as " the fundamental expression of organic forms," and keeping in view the grand idea of unity of design in the formative plan of vital organisms, the study of microscopical anatomy—normal and pathological—has been carried forward with such signal success by Kölliker, Bischoff, Burnett, Lebert, and others, that an intimate knowledge of what is known respecting cell-life and of histology generally, has become the indispensable basis of correct views in pathology and diagnosis.

Dr. Peaslee has given a valuable summary of facts, under the second division of his treatise, relating to the various fluids and secretions of the human body. All of his definitions, descriptions, and remarks, are definite and suggestive, while as a general thing, the most advanced views respecting the chemistry, and physiology of the animal fluids, are clearly stated. In no treatise have we met with a more complete and valuable summary of these facts, and no writer has treated the subject more philosophically.

Though the great work of Lehmann is pretty closely followed as the highest authority on the subject of vital hydrology, our author does not hesitate to adopt conclusions differing essentially from those of that learned writer ; as, for example, after giving a careful account of the morphological elements and the physiology of the circulating fluid, he states that :

" Lehmann's idea that the blood-cells are laboratories, in which the individual constituents of the plasma are prepared for the higher function of aiding in the formation and reproduction of the tissues, is hardly tenable, since the nutrition of the tissues is equally perfect, as far as can be perceived, in animals whose blood is destitute of this histological element. Indeed, that the red blood corpuscles have any direct relation to the formation of the tissues, is very improbable ; dis-assimilation, being, it is believed, their special function."

The chapters devoted to the urine, and the various other secretions and fluid products, normal and diseased, are beautifully illustrated, and filled with practical suggestions and conclusions.

In the third division, which comprises more than half the volume, the histological characteristics of the various tissues are examined in the following order, and with as much minuteness as the limits of such a work will allow:—1. Epithelium; 2. Yellow fibrous tissue; 3. White; 4. Areolar; 5. Adipose; 6. Cartilage; 7. Osseous tissue, and the bones and dental tissues; 8. Contractile tissue; 9. The structure and special combinations of tissues pertaining to the several viscera, and to the organs of special sense.

The definition and descriptions of the various histological elements are exceedingly clear, and the microscopical illustrations are very numerous, and in the highest degree satisfactory. Though these are acknowledged to have been drawn principally from Kölliker's classical treatise, they possess sufficient originality, and are in conformity with the most advanced views at the date of publication. The various physiological, pathological, and general anatomical relations, which the several histological elements specially sustain, are abundantly illustrated, and briefly explained; thus rendering every chapter eminently practical, and therefore interesting to the student.

It should be mentioned, that measurements, or dimensions, of the minute structural elements have been reduced by Dr. Peaslee from the French to the English standard, the fractions of inch being given instead of millimeter—a service that every author of an American or English book should imitate.

The completeness and simplicity of Dr. Peaslee's work constitutes one of its crowning excellences as a class-book for students. But its greatest merit consists in its successful fulfillment of the author's original plan of making the elementary histological facts directly illustrative and explanatory of the great practical questions in physiology and pathology. Hence this treatise will be found eminently useful to the practitioner as well as the junior student. No physician should fail to possess the book; and those who have not already become familiar with all the advances in the department of knowledge of which it treats, will consult its pages with peculiar satisfaction and advantage. It is not necessary that every busy practitioner of medicine possess and work a microscope, in order to attain to a correct knowledge of fundamental anatomy, or of pathological products. But every physician must know the basis upon which scientific medicine now rests, and should be able to appreciate the nature and evidences of pathological and physiological changes in the human body, if he would minister intelligently and successfully to the sick, or properly teach the laws of health. We believe that every physician, however, meagre or however superior his attainments in the exact and fundamental departments of knowledge, upon which medical science depends, must rejoice at every successful attempt to apply the elementary truths of histology and chemistry to the practical purposes of exact pathology, which is the basis of accurate diagnosis, a rational therapeia, and correct rules of hygiene; and such, manifestly, was the original design of Dr. Peaslee in preparing this treatise. This design is happily seen in the sections relating to the epithelium, the fibrous tissues, the skin and the mucous membranes, and in the chapters on the glandular and other viscera. The special histology of the several parts is studied in connection with the physiological anatomy, and the pathological conditions of the organs. This constitutes a most valuable and original characteristic of the book—a merit highly important to the busy practitioner, as well as to the young student of medicine.

As our space will not allow us to give an extended analysis of the body of the treatise, we will close this notice of the volume by venturing a brief practical suggestion, respecting the higher development, and more extended applications of histological and elementary physiological knowledge generally.

The revelations of the microscope, in regard to the elementary or morphological constitution of vital organisms, are acknowledged to have thrown much light upon the phenomena and processes of life in those organisms ; while morbid changes therein have, by the same means, been investigated with equally happy results. Hence, great improvements in our means of diagnosis, in various maladies, and also much advancement in our knowledge of the etiological and the special pathological history of some diseases. But the practical applications of such elementary knowledge, are yet too limited, particularly in respect to therapeia, prophylaxis, and hygiene. Many ultimate principles, also, that yet remain undiscovered in the arcana of vital existence, and which seem to be foreshadowed by discoveries that have been made, seem requisite to the complete triumph of science and art over the removable causes and consequences of disease.

These great ends of scientific research would seem to be measurably attainable, and whoever would make signal advances towards such triumphs, must do something more than invent improved instruments, or discover new elementary facts. Vast stores of elementary facts have already been accumulated, and the typical forms of organic life have been beautifully displayed, by aid of the microscope. But are we to make no advancements beyond a simple knowledge of primordial and structural cell-life, as taught by Schleiden, Möhl, Schwann, Burnett, and Kölliker ; and shall we only attempt to emulate the discovery of Ascherson and Bennett, in searching for primordial utricles ? Could we, with material agents, analyze the vital principle itself, comparatively useless would be such an achievement, though we demonstrated the identity of electricity, and the *vis nervosa !*

Other powers and richer fruits than those of the most far-reaching analysis are required for the improvements most important to the practical science and art of medicine : the analysis we require, as an essential antecedent to the greater powers and wider scope of *synthesis.* But we most require to know the significance of the elementary facts already accumulated, that we may invoke therefrom, great practical principles : not hypotheses and useless theories, but logical deductions ; or, at least, direct teleological conclusions.

Guided by the never-varying principle of *unity of plan,*—a fundamental law, everywhere seen in the Creator's works—we may yet find the true interpretation of all the phenomena and laws of the structural and vital homologies, discoverable in those vital processes, healthy and diseased, that now baffle the powers of simple analytical research. In the successful investigation of nature, her *physical* phenomena and various forms, should be studied in connection with the *teleological* expressions and indications of those forms and phenomena; and immediately upon the conclusions of extended and reliable *analysis*, should follow the most philosophical and rigid deductions and generalizations. The prolific fruits of analytical studies in organic chemistry and microscopical anatomy, need to be gathered up, examined, and re-examined, in connection with all that is known in special and comparative physiology, and from the correspondences, types, and the community of plan discoverable therein, may yet be evolved the most occult and intricate laws of life, disease, and cure. And we conceive that we are warranted in believing that scientific medicine, in the departments of experimental research and teleological study, offers greater prizes, and higher honors, than did the field of cosmology to Kepler and Newton; for, "*Natura in minimis maxima est.*" In reserve for the medical philosopher who shall perfect the investigations, and prepare the treatise, relating to the ultimate histological facts and physiological truths that rational medicine *now demands*, are honors that will inscribe his name on the same scroll with the illustrious names of Harvey and Jenner, Hunter, Bell, and Marshall Hall. E. H.

Art. XII.—*The Principles and Practice of Obstetrics, including the Treatment of Chronic Inflammation of the Uterus, considered as a frequent cause of Abortion.* By Henry Miller, M.D., Professor of Obstetric Medicine in the Medical Department of the University of Louisville. Pp. 620. Philadelphia, Blanchard & Lea.

This is essentially an American work on obstetrics, and its author promptly recognizable as one "addictus jurare verba nullius magistri." In the progress towards the formation of a national school of obstetrics, there seems every reason to believe that the liberality of sentiment characterizing the national mind, joined to the practical tests applied to all theoretical suggestions, must eventually furnish us with principles for our guidance, combining most of the excellences and few of the defects recognizable in other countries.

We are peculiarly placed; no national jealousies frowning on suggestions from any quarter, and in addition to the acquaintance with literature in foreign tongues, which may be everywhere met with in our country, crowds of well educated gentlemen who have settled among us, bring to the bedside, the review, and the medical society that personal knowledge of methods of treatment proposed in their native countries, which at once familiarizes the practice; and again, their frank appreciation of the relative status of their countrymen soon enables us to learn that Dr. So-and-so is a visionary and impracticable enthusiast; Dr. This, a man who writes for practice or notoriety, and would not scruple to lie on occasion; while Dr. That, on the contrary, is a quiet, trustworthy man, devoted to science, truthful, sincere, and to be believed.

It is impossible to overlook the influence of this on a class of practitioners forming the bulk in every country, who have not travelled, are not over educated, read little, but pick up with great shrewdness in conversation and professional intercourse, facts of value to themselves.

The work before us is that of a gentleman, evidently truthful, reflective, hearty in his likes and dislikes, and, all things considered, eminently sound in his teachings. Like the majority of our treatises, the vast attainments of the Germans are here overlooked, while the medical literature of Great Britain and France are familiar as household words, and the element distinctive of the new and exact school of teachers lacking, viz.: basing statements not on the ipse dixit of the author, but upon cases recorded at length, at the risk of allowing a skillful critic to turn the batteries against the author himself. This is fast becoming an essential feature, the effect of which on hasty statements and on sound medical instruction, cannot be over-estimated.

To follow the many tempting leads offered in this work would be an impossibility, with the limits here assigned, and the cursory character of the notice can be the more readily reconciled to the reviewer's mind, as he can heartily recommend the book, not in the hackneyed phrase as one " without which no physician's library can be considered complete," but as instructive and suggestive to the student, and refreshing to the obstetrician, from its manliness and the straightforward way in which all questions interesting to the author are met.

The chapter on clinical exploration of the pelvic organs is interesting, but in the opinion of the reviewer scarcely goes far enough. Dr. Miller has proposed the combined use of a tubular speculum, shortened on its pubic border with a sound which he thus introduces through the exposed os uteri, and his argument is chiefly the advantage thus derived from seeing blood or sanguinolent mucus issuing from the os uteri under certain circumstances. This seems to us to be very slight, inasmuch as the fingers could convey the intelligence quite as certainly, while in difficult cases we are convinced that introduction of the instrument may be only possible when the uterus is steadied by a finger passing well behind the cervix. However, that is a matter in which individual fancies are entitled to full play, when the diagnostic uses of the instrument are so fully appreciated ; but it seems to us that the tendencies of Dr. Miller's teachings are to discourage the digital examination of the ovaries. Now, while we agree with our author in insisting on the sound for appreciation of many displacements, and strongly tend towards the belief that many displacements, incurable, but unattended with inflammation, do not merit the exaggerated attention which they receive, we yet know, from bedside observation, that the rationale of persistent painful symptoms may be frequently found in enlarged, inflamed, or displaced ovaries, perfectly appreciable to the touch.

And we confidently expect that the time will very shortly come, when no uterine exploration can be considered as thoroughly satisfactory which has not at least endeavored to reach organs which we can frequently touch, and which often throw a flood of light on obscure symptoms; and we have seen cases where competent men have blindly followed the routine appreciation of displacement and ulceration, without ever thinking to inquire whether enlarged or displaced ovaries might not be within reach, and most exquisitely painful to the touch; and we hold the statement of Dr. Miller—"I fear that the frequent rectal search for it (ovaritis) may debase the sexual organs in our estimation," to be either a quiz or a puerility.

To show, though, how far Dr. M. is from indulging in puerilities, it may be well to say that he confesses to having accidentally brought on an abortion by the sound on one occasion, while on p. 180, when referring to a case in which, by delicate professional conduct, he saved a brother chip's reputation, he thus truly remarks:

"If all the errors of diagnosis which the wisest of us have committed were duly chronicled, I opine that a large hiatus in our libraries would be compactly filled with choice reading. For my own part, I own that if I have not fallen into this precise error, I have into others quite as egregious; and I imagine that no one ever practised medicine long without having his self-esteem abated by his manifold blunders."

The whole chapter on the prophylactic treatment of abortion, which discusses the vexed questions of managing diseases and displacements of the unimpregnated uterus, may be read with great interest and profit. He discards pessaries and intra-uterine injections; but in reference to a very difficult class of cases, remarks:

"After I had discarded pessaries in the treatment of endo-uteritis, complicated with retroversion, I was led to conjoin repeated replacement of the uterus by the sound and cauterization of its cavity, while the organ was in situ, and by this method of treatment, which I may venture to call my own, have obtained more satisfactory results than by all other methods which I had previously tried."

The value of this can be indorsed by the reviewer; but, in his judgment, there is no sound that, for this purpose, can be compared with the sound made by Tiemann in this city. This is a No. 10 catheter, which can be flexed at will by a screw in the handle. By this, after replacing the retro-flexed organ, you can leave it abruptly ante-flexed, a contingency provided for by no other instrument, and of positive advantage.

Chloroform is used by Dr. M., who supports the advantages from anesthetics in labor by forcible arguments.

"*Meddlesome midwifery is bad, but a shilly-shally midwifery is worse,*" says Dr. Miller; a key note to the temperate and yet determined manner in which he enters the lying-in room. But his recommendation to perforate the head of the living child when puerperal convulsions awaken just apprehensions for the mother, "whilst from the tedious manner in which the dilatation of the os uteri is going on, it is wholly uncertain how long we must wait before delivery can be accomplished by the forceps," seems to us calculated greatly to mislead the practitioner relying on Dr. Miller alone for advice.

Why not advise the douche to dilate the os? Why not recommend the alternative of incision of the cervix rather than the murderous use of the perforator? Why not show how small an amount of dilatation is necessary for a slender pair of forceps?

Until our magnates in obstetrics will appreciate more clearly the capabilities of the forceps, and avoid more carefully the sinful errors of the British school in this direction, we, as a nation, will not have attained the position in obstetrics to which, by the aid of Dewees, Meigs, and Miller, we are certainly tending. G. T. E., JR.

ART. XIII.—*Researches on Primary Pathology, and the Origin and Laws of Epidemics.* By M. L. KNAPP, M.D., late Professor of Materia Medica, and President of the College of Physicians and Surgeons of the University of Iowa, etc., etc. 2 vols, 8vo., pp. 312 and 336. Philadelphia: Published by the Author. 1858.

DR. KNAPP, some years ago, published certain essays upon Cholera, Puerperal Anæmia, etc., announcing his belief that those and many other maladies depend upon a scorbutic diathesis. The medical public, therefore, will not be surprised at the appearance of an elaborate treatise from the same author, "claiming to set forth the *vera causa* of not only Epidemic Cholera, but of every other epidemic form of disease, yea"—as the author boldly adds—"of all sporadic diseases.

As Dr. Knapp has in these volumes frankly and fearlessly published to the world "new doctrines," as remarkable as they are universal and important if true, we are called upon to examine carefully the views and the facts he has presented, giving utterance to our own impressions on the subjects discussed in the volumes as frankly as their author has made known his opinions.

The work "claims to unfold the primary pathology of disease." The first volume comprises separate essays on—1, Epidemic Cholera; 2, Cholera Infantum; 3, Nursing Sore-Mouth, including chapters on the medical topography of the State of Illinois, the nature of malaria, with cases and deductions. The second volume is devoted to the defence of the following laconic and rather indefinite thesis: "The scorbutic diathesis is primary pathology." The essays comprised in the first volume are, in many respects, interesting and practically important; but the labored résumé of facts and opinions relating to scurvy, we think, will fail to convey to the reader's mind the important idea that has become so strongly fixed in the mind of the author, viz., that scurvy is the type of all disease, and that *all disease* is really and essentially scurvy.

Dr. Knapp has certainly made himself quite familiar with those scattered waifs of medical literature reciting the history and phenomena of scurvy; and these, but for his industry and enthusiasm, would probably never have been arranged with such care. We may thank our author for this gratuitous labor, though the terms scurvy and scorbutic diathesis have always been used without any very definite pathological signification. Fortunately for his purposes and for his philosophy, Dr. Knapp has fully appreciated the fact that these terms have been so indefinitely and loosely applied that he hazards no essential pathological facts in uttering the following remarkable language: "We plant ourself on the eternal rock of this induction, that where nutrition fails, from whatever cause, scorbutic pathology begins, generalizing disease to a known and an adequate cause, through all the world's history. We are satisfied that this is indeed the truth; that the insidious, latent, morbid condition of the system, known as the scorbutic taint or diathesis, was, is, ever has been, and ever will be, the *fons et origo* of all general diseases, or of universal pestilence."

By means of the testimony or sketches relating to scorbutic disease —as given by ancient and by modern writers, from Hippocrates to Eugalenus, Lind, Blane, Budd, and Barnes—these sweeping conclusions are made clear to our author's mind, if not to the minds of his readers. Even Hahnemann, with his hypothetic "*psora*," and Dr. Rush, with his unproven theory of *unity* of disease, are triumphantly summoned to this labored demonstration of Dr. Knapp's monopathological doctrine of universal scurvy.

Fortunately for his argument, but, we think, unfortunately for the soundness of his philosophy and his pathological generalizations, Dr. Knapp has studied cholera and nursing sore-mouth, in their etiology and their special pathology, as great types of disease in general. Now, in regard to the maladies just named, it perhaps may, with some propriety, be claimed that they originate and extend mainly by virtue of those erroneous dietic habits and faulty hygienic conditions which are productive of the scorbutic diathesis; but no intelligent observer will deny that there are multitudes of diseases that occur under conditions quite the reverse of such as induce the scorbutic diathesis. Witness most of the phlegmasiæ.

As before remarked, we cheerfully accord to the essays comprising Dr. Knapp's first volume, the merits of having recited most interesting etiological and therapeutical observations and facts, and of suggesting important ideas respecting proximate causes of the maladies treated of in that volume. But we doubt whether the facts relating to the most important of those maladies, viz., cholera, could warrant us in adopting the language of our author, when he states that he is "forced to the conclusion that cholera is but a modified form of scorbutus, and a hemorrhagic termination of latent scurvy."

In the essays on *cholera*, *cholera infantum*, and the *nursing sore-mouth*, the author has adduced an array of facts, etiological, pathological, and therapeutical, that goes far towards the confirmation of the theory which he has been led to adopt respecting the essential pathology of those diseases. But he has evidently taken a partial view of the subject, as his reasonings fail to account for the fact that the cholera originated and has made its greatest ravages among the vegetarians of Hindostan; and also that the fruitful valley of the Genesee, and the prolific borders of our inland lakes have been the localities where the nursing sore-mouth has extensively prevailed; rather than our densely populated cities and the woodlands of mountainous regions where the people are far more carnivorous than in the regions first named, and quite as generally so as the population in the Mississippi valley.

While we believe that Dr. Knapp has called attention to a very important class of facts relating to the etiology of epidemic cholera and cholera infantum, we conceive that he overlooks the evidences of that special epidemic meteoration which so clearly stands connected with every epidemic disease. However important and predisposing may be the scorbutic diathesis to the development or the spread of cholera and the nursing sore-mouth, there manifestly is another and more essential cause without which those maladies never become epidemic. The prevalence of those maladies among a fruit-eating and vigorous population would seem to disprove Dr. Knapp's hypothesis that scorbutus arising from too exclusively animal diet, or that blight, famine, and impaired nutrition uniformly precede and produce those diseases.

The etiological history of the diseases just named having been traced by Dr. Knapp to what he believes a special dyscrasia arising from impaired nutrition, he has undertaken, in his second volume, the great task of determining the vexed question of what constitutes the exact and earliest *point d'appui* from health, or what the *primary pathology* of all forms of disease. Having arrived at the conclusion that the scorbutic diathesis is the primary pathological condition and proximate cause of all diseases, our author closes his treatise in the following language, which aptly illustrates the importance of his philosophy, if true: "The doctrine of the unity and scorbutic pathology of disease is a great truth or a very great fallacy. . . . If true, it upsets the hypothesis of malaria, zymosis, epidemic influence, occult qualities in the air, etc., etc., as causing disease; and substitutes known natural causes, acting simply by impairing the nutritive function."

Claiming that "the doctrine of the scorbutic pathology of disease is an innovation as bold in medical philosophy as the Galilean theory was in astronomy" (p. 155, vol. ii), Dr. Knapp has allowed his mind to become surcharged with an enthusiasm such as the philosopher experiences, when some great discovery leads him involuntarily to exclaim, Eureka! Eureka!!

But we sincerely regret the lack of charity which leads our worthy author to say, "The probability is, judging from the past, that the truths of our doctrine will never be admitted while there is a shot left in the locker of the old Hull of Physic." Indeed the writer seems to have so nourished the phantom of an incredulous bigotry and opposition, which he has unnecessarily anticipated from his professional brethren, that many of his pages assume a style that is remarkably polemical for scientific literature of the present day. The fact is, Dr. Knapp appears to entertain a somewhat contemptuous opinion of the existing status of what is generally accepted as scientific medicine, for he asserts that "Practical medicine is, as yet, without its alphabet of first principles, entitling it to be ranked among the exact sciences" (p. 334, vol. ii). But much as he deplores the unprogressive state of medical science and of the popular mind of our profession, he finds evidences of advancement in therapeutical philosophy. "Lemon juice and the salts of potash are now taking the place of the lancet and mercury in the treatment of rheumatism and the phlegmasiæ; cod-oil and whisky-punch the place of pukes, and v. s. in phthisis pulmonalis; sulphuric acid the place of calomel in cholera; and these changes in therapeutics (adds Dr. Knapp) only find their solution in the scorbutic pathology of those exceedingly grave maladies."

It would appear, from various passages in these volumes, that Dr. Knapp gives to the term scurvy or scorbutus an exceedingly wide signification, and a definition so peculiar and so universal in its application, that it actually becomes synonymous with his opening thesis, viz., that "*the scorbutic diathesis is primary pathology;*" or that scorbutus is the essential element of all diseases,—the first deviation from health.

In attempting to give a definition to the term scorbutus, Dr. Knapp closes by saying, "The scorbutic diathesis, then, is the natural negative of health, or want of health; and is plainly the impairment of health, or beginning of disease. The word *scorb*, in the Sclavonic language, signifies *disease;* hence the name scorbutus (disease-utus), according to Lind." Again, he says: "Our doctrine maintains not only the adventitious acquisition of the scorbutic taint, but the hereditary transmission of it also; that the organization or form of offspring is moulded. fashioned, or stamped with it, under the parental defects in nutritive or formative life. It is, then, the *predisposition* to disease of all writers who use this term." . . . . "This state, then, is the *first link in the chain of disease*, or the *predisposing cause.* Our philosophy, then, clears away the obfuscations in pathology, digs to the bottom, and unfolds the *primary pathology*, the root of all diseases." And finally, this conclusion: "The symptoms of disease, then, are only evidences of any antecedent morbid condition the cause and nature of which are wholly unknown, except so far as scorbutus is concerned. It is but a just inference, therefore, to say that the symptoms of disease are, in all cases, but the wailings of the thousand-and-one forms of scurvy—rebellious accents against obstructions af the nutritive function; that the objective signs are more earnest appeals and warnings still, and the anatomical characters are so many lamentations over the insufficiency of our art. Neither the symptoms, objective signs, nor anatomical characters constitute the disease which lies anterior to all these, and is, as we have before said, a negative, a condition of want, a want of nutritive life, impaired nutrition, obstructed nutrition, *inlaid scorbutus.* Disease, then, in its essential nature and *primary* pathology, is a unit."

We admire this bold and definite declaration of opinion, and will forbear all comment; albeit, we confess a constitutional inability to fathom the ultimate penetralia of *life*—physiological and pathological, which to our author's comprehension seem as familiar and as experimentally demonstrable as the simplest formulæ and analyses of chemistry.

We believe that Dr. Knapp has done good service for humanity, by calling attention to the vast importance of those natural provisions for suitable nutrition, and those general hygienic conditions which are essential to healthy animal life, and which are too often disregarded alike by the learned and the ignorant, the affluent and the poor. Our author's views on the subject of hygiene, in its relations to prophylaxis and a simple therapeia, are of the most practical character, and should be heartily indorsed and practically illustrated by physicians. A religious observance of the laws of life and health,—not the theories of philosophers and the drugs of the apothecary, is the agency by which primeval health and vigor are to be restored to the human race.

By the following passages it will be seen that notwithstanding the means of relief from the curse of scurvy, as the source and essence of disease, seem to be very simple and easily applied, there exists an insurmountable difficulty in the way of the perfect physical regeneration of man, and that there is a fearful probability that even *physically* "in Adam's fall we sinned all." "There is but only (!) one law of healing —re-invigorating the nutritive function". . . . "Nobody is clear of some degree of latent scorbutus. If the effete elements or waste of the tissues could be disposed of and exonerated from the system without being returned into the bloodvessels, and a perfect dietary always supplied, we *might begin to look* for purity, health, and entire exemption from any scorbutic taints ; but as the case stands, *and ever will stand, the seeds of scorbutus are forever in us, even the most healthy.*"

In both these volumes, we find many valuable suggestions respecting personal hygiene, and the sanitary relations of the various occurrences in the natural world, that may be regarded as having a direct bearing upon the health of individuals and communities ; viz., blights, drought, premature frosts, protracted winters, and short summers, immature fruits and vegetables ; all of which certainly conduce to the impairment of physical health. The author fortifies his general deductions, also, by analogies drawn from the history of *epizoötics* and *epiphytics* (we use the latter term in a special sense), and there is no field of study more inviting to the epidemiologist. But even here Dr. Knapp has been tempted into some very untenable conclusions : Quoting from the Census of Ireland, under date of August 18th, 1847, as follows : "There was a failure in the beans, from a disease, similar to that in the potato. In the month of September, some blight was observed upon the grain crop.

"In those parts where the population hitherto mainly subsisted on the potato, it was raised with great facility on the mountains, by burning the peat soil, and setting potatoes on the ashes." Dr. Knapp confidently (we would not say blasphemously, for he but repeats the words of impious Iago), remarks : "*Here is confirmation strong as holy writ*, of the truth of our proposition, that the want or lack of the salts of potash, lime, soda, iron, etc , etc., is the secret of the whole matter of the 'potato rot,' blight of grapes, failure of crops, etc." These great epiphytic diseases have been very carefully studied, and from our own knowledge of the facts on the subject, we are warranted in stating, that the foregoing conclusion is utterly erroneous. We do not presume to call in question our author's assertion that, in these days, "every potato is a sick potato, and has the scurvy," but we are surprised at his readiness to adopt and publish such sweeping conclusions and hasty generalizations as fill these volumes, while the moot questions he assumes to settle, present many a hinge and loop to hang a doubt on.

Without desiring to take advantage of Dr. Knapp's peculiar infelicities in logic and style, we doubt not his readers will often be reminded that he might properly have quoted the couplet from Iago complete—

> . . . . "*Trifles light as air,*
> *Are to the jealous*, confirmations strong
> As proofs of holy writ." . . .

We think no one can mistake Dr. Knapp's ideas respecting the nature and relations of scurvy and the scorbutic diathesis. He has given to his definitions and assertions a degree of precision, and an air of absolute demonstration, that is quite unusual for medical writings. If our author's philosophy be sound, and his interpretation of facts correct, then it may be conceded that his claim to the grandest discovery in the history of medicine is fully substantiated. We have carefully examined the three hundred pages of testimony—quotations from all classes of writers on scurvy and epidemics, adduced in the second volume, to confirm the fundamental premises of the doctrine taught in this treatise, viz., that *disease is a unit*, and that unit *scorbutus;* and we confess our inability, by any process of logical deduction and scientific generalization, to arrive at the conclusions with which Dr. Knapp lays the foundation of his philosophy.

Having with much pleasure, some years ago, perused the essays comprised in the author's first volume, and firmly believing that some general dyscrasia and deviation from health often precede and accompany the extension of fatal epidemics, we are glad to have found much in the second volume which illustrates this and other laws of epidemics. But, from a constitutional inability to believe that which is not clearly proven, or at least made consistent and harmonious with the truths we do know, we feel compelled to confess ourself yet remaining in the "old Hull of Physic," a disbeliever alike in the doctrine of unity of disease and the hypothesis of universal scurvy; but with no "shot in the locker" for such a genuinely frank and honest searcher after truth as the worthy author of these volumes. E. H.

BIBLIOGRAPHICAL NOTICES.

ART XIV.—*Elements of Inorganic Chemistry, including the applications of the Science in the Arts.* By THOMAS GRAHAM, F.R.S.L. and E., late Professor of Chemistry in University College, London. Edited by HENRY WATTS, B.A., F.C.S., and ROBERT BRIDGES, M.D. Second American, from the Second revised and enlarged London Edition, complete in one volume, with two hundred and thirty-three illustrations on wood. Philadelphia: Blanchard & Lea, 1858, pp. 852.

WE have in this volume the completion of Prof. Graham's great work on Inorganic Chemistry; the first part of which appeared as early as 1852. In order to introduce all the improvements and discoveries that have been made since the issue of the first part, an appendix has been added to the second part. In its present form it is, therefore, an extended and most complete treatise on inorganic chemistry. To the student of chemistry, we recommend this volume as the latest and most reliable work on that branch of chemical science.

ART. XV.—*Contributions to Operative Surgery and Surgical Pathology.* By J. M. CARNOCHAN, Professor of Surgery in the New York Medical College, etc. With illustrations drawn from nature. Philadelphia: Lindsay & Blakiston, 1858.

THE publication before us is the first of a series of ten numbers; one of which is to be issued quarterly, of quarto size, and containing from thirty to sixty pages each. The present number contains the following articles: *Case of amputation of the entire lower jaw; Remarks on amputation of the lower jaw; Elephantiasis arabum, successfully treated by ligature of the femoral artery, with cases.* These papers originally appeared in this Journal, excepting several cases under the latter head, which were published in the *N. Y. Med. Gaz.* The lithographic illustrations which accompany the work are most beautifully executed, and the paper and typography of the number are all that could be desired at the hands of the publisher. The author has dedicated his volume to GULIAN C. VERPLANCK, ESQ, President of the Board of Commissioners of Emigration, and in a complimentary but graceful epistle, commends his contributions to the perusal of his preceptor, PROFESSOR VALENTINE MOTT.

Though the scope of this work is limited, being confined to the detail of the more remarkable cases occurring in the author's practice, with remarks thereon, we can but regard its publication with favor. So frequently do our best surgical writers give us as their final contribution to the literature of surgery, a formal treatise, containing little if any of their own experience, that we welcome most cordially a work like this, devoted entirely to the author's own practice, and fresh with his own individual and independent views. PROF. CARNOCHAN has thus set a good example for our older surgeons, some of whom, crowned with all the honors which our profession can bestow, and ripe in the experience which position and influence can give, are about passing from among us, without leaving behind them any more permanent record of their knowledge than remains in the memory of their contemporaries.

ART. XVI.—*A Manual of Medical Diagnosis: being an Analysis of the Signs and Symptoms of Disease.* By A. W. BARCLAY, M.D., Philadelphia: Blanchard & Lea, 1858, pp. 423.

THE author of this volume has been medical registrar of St. George's Hospital for upwards of ten years, and during that time more than twelve thousand patients came under his notice. This work is the result of his labors in the investigation of diseases, both before and after death. With such unlimited facilities, it is offered to the profession, in the hope that it may lead to a more familiar acquaintance with disease, and a better understanding of treatment.

We have examined this work attentively, and with the most unqualified satisfaction. It is a chart for the guidance of the clinical student and the young practitioner in the study of diagnosis, of the most positive value. The symptoms of every form of medical disease, general and local, are carefully analyzed, and their proper value given them. Much that is doubtful and perplexing in the diagnosis of the more obscure forms of disease, is thus rendered clear and definite, and a rational system of treatment is substituted for an empirical.

ART. XVII.—*A Treatise on the Employment of the Speculum in the Diagnosis and Treatment of Uterine Disease, with three hundred Cases.* By ROBERT LEE, M.D. London: John Churchill, 8vo, pp. 132, 1858.

THIS book, far from proving the necessity of restraining the use of the speculum, reveals a deplorable state of practical sense and medical education among English practitioners. Nothing could have done more harm to the reputation of our brethren abroad than this little book. Every reader, who shall take the trouble to peruse it, must come to the same conclusion; and even Dr. Lee's great example, as recorded in the preliminary remarks, where a woman died eight days after an examination with the speculum, from meningitis spinalis, proves nothing but the gross ignorance and barbarism of the attending physician. If Dr. Lee was possessed of one particle of patriotism, he would never have published this pamphlet. Our judgment of the book in question may be comprised in these few words: *Si tacuisses, philosophus mansisses.*

ART. XVIII.—*An Essay upon the Relation of Bilious and Yellow Fever.* By RICHARD D. ARNOLD, M.D., Professor of the Theory and Practice of Medicine in the Savannah Medical College.

SEVERAL finely executed colored lithographs, representing the varied and characteristic appearances of the liver, in bilious and in yellow fever, give to Dr. Arnold's essay a peculiar interest and value. The plate exhibiting the characteristic appearance of the liver in yellow fever, is strikingly true to nature. We think it better than a similar coloring in the lamented Dr. Blair's book. Dr. Arnold happily compares the color of yellow-fever livers to the peculiar hues of *boxwood*—a color varying from a dingy to a bright yellow.

The *bronze* liver of malignant bilious fever is admirably rendered; also the varied mahogany and other hues that characterize the liver in the more ordinary forms of remittent fever.

As a pupil of the distinguished Dr. Waring, Dr. Arnold was for many years a believer in the identity of yellow and the bilious fevers; but he now regards the former as a distinct and specific malady, while he evidently believes that it is uniformly of domestic origin, so far as he has observed it in the city of Savannah. E. H.

PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrics and Diseases of Women; prepared for the NEW YORK JOURNAL OF MEDICINE. By E. NOEGGERATH, M.D., Physician to the Female Department of the German (Canal Street) Dispensary of the City of New York.

I.—ANATOMY AND PHYSIOLOGY.

1. *W. T. Savory.—An experimental inquiry into the effect upon the mother of poisoning the fœtus* (June, 1858).—Although the question, as to the possibility of transmitting poisons through the fœtal vessels of the cord to the maternal blood, seemed to be settled in the negative by the experiments of Magendie, many physiologists still believe, that the fœtal blood commingles with the general mass of the mother's blood; it inoculates her system with the qualities of the fœtus; and that, as these qualities are in part derived by the fœtus from its male progenitor, the peculiar constitutional vices of the latter are thereby so engrafted on the system of the female, as to be communicable by her to any offspring she may subsequently have by other males. And as, moreover, the nature of Magendie's experiments appeared to Dr. Savory objectionable, he followed another method, which was crowned with affirmative results. His general plan was as follows: By opening the abdomen and uterus to expose and isolate a living fœtus; then to inject into it, with the least possible violence, some substance capable of ready absorption, and the operation of which is marked by obvious and unmistakable effects; great care being taken that no trace of the substance came into direct contact with the maternal tissues. The fœtus, thus injected, was placed in a condition most favorable for the continuance of the circulation, and symptoms of the operation of the poison upon the mother were carefully noted. The poison Dr. Savory selected was twenty-four grains of strychnia, dissolved in seven drachms of distilled water, by the addition of one drachm of acetic acid. The subjects of his experiments were dogs, cats, and rabbits. Five experiments are reported, from which it seems that proof is no longer wanting, of the direct and rapid transmission of matter from the fœtus to the mother through the blood in the placenta.

2. *G. Schmidt.—Remarks on the origin and practical value of the so-called navel-string souffle* (*Scanzoni's Beiträge z. Geburtskunde, etc.*, B. 3. 1858).—The opinions of the different authors, who have paid attention to this interesting phenomenon, being divided as to its true seat and nature, Dr. Schmidt feels justified in the publication of five instances of

navel-string souffle, perceived before the child was born, out of 500 obstetrical cases, all of which were thoroughly examined with the stethoscope.

Case 1.—The child was born in a state of asphyxia, and could not be revived. The post-mortem was performed by Prof. Virchow, who found a decided hypertrophy of the right ventricle of the heart, insufficiency of the valvula mitralis et tricuspidalis, and a deposition of several red, gelatinous corpuscula on both valves.

Case 2.—When the head of the child was born, the navel-string was found twisted around the neck twice, and so strong, that the vessels of the neck were compressed, in consequence of which, the face had a cyanotic color. The child died after a few short inspirations.

Case 3.—The sounds of the fœtal heart were heard clear and distinctly, immediately before the rupture of the amnion. When the water had been discharged, a prolapsus of the umbilical cord was discovered, upon which the head of the child was pressing with considerable force. Auscultation applied at this moment, discovered not the former sound of the fœtal heart, but instead a souffle, which disappeared as soon as the prolapsed string was removed into the cavity of the womb.

Case 4.—The sounds of the fœtal heart were accompanied by a strong souffle. Still, when the child was born, the navel-string was not twisted round the neck; the child was healthy, and the sounds of his heart found in good order.

Case 5.—Instead of the first sound of the heart a souffle was detected by auscultation. When the head was born, the umbilical cord was found tightened around the neck. The child was asphyxiated, and it was half an hour before it could be declared out of danger.

From an analysis of these cases, Dr. Schmidt comes to the conclusion, that the so-called umbilical souffle may take its origin: *a*. From diseases of the fœtal heart. *b*. From circumvolution of the umbilical cord around the neck of the child. *c*. From other compressions of the navel-string depending upon the position of the child.

In regard to the practical value of the funic-souffle, Dr. Schmidt is of opinion, that its presence, in most cases, indicates danger to the life of the child.

II.—PREGNANCY, LABOR AND PUERPERAL STATE.

1. *Dr. Allen on dystocia, in consequence of perfect ossification of the fœtal head* (*New Orleans Medical News and Hospital Gazette*, 1857)—Among the causes which may prevent an easy confinement, the early ossification of the fœtal sutures is rarely met with. Still, at times, this incident alone is sufficient to demand the use of perforators for delivery. An instance of this kind is recorded by the author, where, after a series of strong pains for twelve hours, the head did not move onwards, though there was no hindrance from any part of the pelvis. Neither a fontanelle nor a suture was to be recognized, and perforation was resorted to, which operation, however, was attended with a great many difficulties, because of the unusual density of the

cranial bones. The delivery was at last effected with the aid of the forceps. The examination of the corpse showed that the head was in a condition similar to that found in grown persons, and the bones as hard as stone.

2. *Dr. Clay on an important form of intractable vomitus during the last months of pregnancy* (*The Midland Quarterly Journ.*, Oct., 1857).—The different remedies usual against obstinate vomiting are very often without the least benefit, because its causes are only imperfectly known. Therefore, Dr. Clay calls the attention of the profession to one of its causes, which he had occasion to observe three times. This is an increased painfulness of the neck and mouth of the uterus, in consequence of inflammatory action. The slightest irritation of these parts, causes the most violent vomiting, which stops as soon as the irritation is removed. Therefore, he recommends such a position of the patient, that the head of the fœtus is prevented from pressing upon the uterine neck, and, if necessary, the application of leeches for subduing the inflammation. This treatment proved perfectly successful in the three cases recorded.

3. *H. Bennet on hemorrhagia during the first months of pregnancy* (*Lancet*, Jan., 1858). The cause of bleeding in the first months of pregnancy, is very often the consequence of chronic inflammation and ulceration of the womb. Therefore, it is necessary to apply the speculum in cases of this nature. If, on the contrary, the cervix uteri is found free from inflammation, and the bleeding goes on unconnected with uterine contractions, it is very probable that a mole or hydatides are present. Hemorrhages, if connected with chronic inflammation during pregnancy, have generally a good effect upon the diseased condition of the womb, in lessening the state of congestion. Dr. Bennet is of opinion, that in all cases of returning catamenia during pregnancy, the uterine orifice is the seat of inflammatory ulcerations, so that the bleeding cannot be properly called a menstrual one. Therefore, a woman who believes herself in the family way, notwithstanding the continuance of her courses, is very likely not so, if, after careful examination, the cervix is found healthy.

4. *D. A. Pagenstecher on lacerations of the vagina during labor* (*Wochenbl. d. Zeitschrift. der k. k. Gesellsch. der Aerzte zu Wien*, 1857, No. 46).—Dr. P. is of opinion, that the vagina is lacerated during parturition, in many instances; an accident which in most instances escapes detection, while the wound unites of itself, during childbed. Three cases are reported, in which the perforations of the vagina were discovered by mere accident.

Case 1.—After an easy forceps operation, a rupture was found running across the anterior wall of the vagina, close by the neck of the uterus, through which several fingers could be introduced, and advanced up to the body of the womb. Four days afterwards, the edges of the wound were scarcely as large as a sixpenny piece, and were found perfectly healed after the first week.

Case 2.—After a forceps operation for contracted pelvis, Dr. P., when endeavoring to remove the afterbirth, detected a laceration of the vagina, close behind the cervix, through which the fingers could be introduced into the spatium Douglasii, where they touched portions of the intestinal tube. When the placenta had been taken away, the uterus was pulled down into the small pelvis, in order to bring the edges of the wound together. Not the least accident was observed after this injury, and all was healed up in a short time.

5. *Prof. Litzmann on some new contributions to the doctrine of uræmia during and after pregnancy* (*Transactions of the Berlin Obstetrical Society, Monatsschrift f. Geburtsk.*, June, 1858).—In a paper, read before this society, Prof. Litzmann expresses his opinion, that future times would establish the fact that eclampsia ought to be considered as a symptom of uræmia with very few exceptions. Still, eclampsia is not the only form of uræmic intoxication. Other symptoms of this affection are, amaurosis, coma, mania and typhoid fever. The most general cause of uræmia in cases of this kind, is Bright's disease of the kidneys, *i. e.* an exudation of an albuminous and fibrinous fluid into the urinary ducts, in consequence of which the excretion of urea and other ingredients of urine is checked. It most commonly takes its origin during the latter months of pregnancy, owing to a stasis of the venous blood in the kidneys. The urine taken from women thus affected shows a considerable decrease of urea, and very often of lithic acid. It often happens that the progress of the disease, as detected by the microscope, does not correspond with the symptoms during life, and the reaction of the system seems to depend more upon the extension than upon the intensity of the affection. If a considerable portion of both kidneys is affected with the first stage of the disease, the effect upon the constitution of the blood is greater than if a smaller portion is in a more advanced stage. In the former instance, the excretion of urea must be more restricted, than in the latter one. This is exemplified by the history of a case, where, with a seemingly far advanced degeneration of the kidneys, the excretion of urea was not diminished, and consequently, no uræmic symptoms occurred.

The second case reported was one of congestion of the kidneys, in which severe uræmic symptoms set in, while only very slight traces of albumen could be detected in the urine. But a chemical analysis proved a considerable decrease of urea during the several attacks; and when the patient began to recover, a larger quantity of urea could be detected in the urine. The child which was born with a cyanotic tint, died twelve hours after birth. A chemical analysis proved the presence of a considerable quantity of urea in his blood.

6. *Prof. Virchow on puerperal fever, as observed in the Charity-Hospital of Berlin* (*Transactions of the Obstetrical Society of Berlin. Monatsschrift f. Geb.*, June, 1858).—The epidemic observed extended from the fall of 1856 up to the present time, making 18 months altogether. The fever was at its height in both winters, confirming a fact already pointed out by Dr. Virchow in 1847, that the disease is more prevalent in winter than at any other season, thus contrasting with the so-called traumatic fever, which is more prevalent in summer time. In almost every case the post-mortem discovered some localized affection. One

of the most surprising features was the frequent presence of recent endocarditis, with undoubted symptoms of puerperal fever during life. The affection, in most cases, had involved the mitral valve. In some of these it could be stated that particles from the diseased valve had been removed, swept away with the current of blood, and deposited in distant localities, thus obstructing capillaries, and causing local inflammations, phenomena which hitherto have always been called metastatic and pyæmic deposits. The particles from the mitral were recognized in these embolic deposits by treatment with a solution of caustic potassa, by which fresh fibrinous concretions are partially dissolved, while the fragments from the heart underwent no change. In these cases, the uterus was found perfectly healthy, and the symptoms of puerperal fever started exclusively from this affection of the heart. The author met with four cases of this kind, in one of which the sudden death was caused by a malacia of the entire heart. He therefore considers this endocarditis of a puerperal character, and thinks the condition of the heart ought to be more generally considered in cases of so-called metastatic affections, especially if the state of the abdomen does not sufficiently explain either the violence of the disease or the frequency of the pulse.

At the time when the epidemic was at its height, most of the cases were of a peritoneal character, among which the greatest number was free from metastases. The nature of this peritoneal inflammation showed two distinct forms ; one was a mere superficial peritonitis with partly plastic, partly purulent exudation ; the other, more dangerous, was of a diphtheritic character, the effusion of which spread to the deeper layers of cellular tissue, which afterwards degenerated, thus presenting a mixture of detritus and pus. This is the same diphtheritic process which in so many instances seizes the inner portion of the womb.

In one case the uterus itself was the seat of inflammation, which resulted in gangrene. Of more common occurrence was ovaritis, representing also two different forms, viz., a superficial inflammation, resulting in abscess of one or more follicles, which, by rupturing, gave rise to violent peritonitis; or a diffuse inflammation of the parenchyma, leading to considerable enlargement and malacia of the ovary.

At other times, phlebitis prevailed, generally connected with metastases, which find a natural explanation, if considered as embolics. Inflammation of the lymphatics was scarcely ever followed by metastases, which finds its natural explanation in the fact that the greater number of lymphatics take their course through the lymphatic glands, in which larger particles may be retained, and may produce lymphangoitis, but not vascular thrombosis. These latter affections are generally connected with rupture of the perineum or vagina, or lacerations of the cervix uteri, and are often complicated with gangrenous destructions of the cellular tissue in the pelvis and fossa iliaca.

7. *Dr. Küchenmeister on aphthous fungus as found on the female nipple* (*Wochenbl. d. Zeitschrift. d. kais. königl. Gesellsch. d. Aerzte zu Wien*, June, 1857).—The author, whose authority regarding parasitical formations is so well known, entering upon the question whether the oidium

albicans takes possession of the nipple of the nurse, shows that the same nipple may be the seat of this fungus. He gives a case in which the aphthæ were found on the cracked nipples of a person who had been suckling an aphthous child. He quotes at length a microscopical description of a fungus found by Hoffmann and Leuckart, which had a double form, one having all the characters of an oidium, and the other showing slightly septate threads, which, in their lateral branches, developed sporangiæ (sporidia), out of which the spores proceed. He states his opinion that the structures known as aphthæ exhibit mostly two forms of fungus; one truly forming sporangiæ (sporidia), with spores, and one only forming coccidiæ, the latter exhibiting what was ordinarily termed oidium albicans. This oidium he considers to be only an undeveloped form of the other, which is probably a leptomitus.

8. *Dr. Poitivin on the application of natrum boracicum in metrorrhagia.* (*Rev. de thér.*, 1857, 45).—Two cases of severe hemorrhage after delivery are reported, in which this remedy was applied with great success. He dissolved half an ounce of the salt in four ounces of water, and ordered to take a tablespoonful every hour in one case, and in the other one the same quantity every ten minutes. The doctor observed no evil consequences from the administration of the drug.

III.—PATHOLOGY OF NON-PREGNANT WOMEN.

1. *Dr. Bison on anteversion of the uterus, with endometritis and symptomatic paralysis* (*Gaz. des Hôpit.*, Oct., 1857).—This case, which occurred in Dr. Nonat's ward, shows that diseases of the womb have not only an influence upon the sensitive, but also upon the motory nerves. A lady, 39 years of age, of a healthy constitution, who had menstruated since she was seventeen years old, had been delivered of a healthy child in her twenty-second year, after which she complained of pain in her back, and of fluor albus. These sufferings increased after some years so much that she applied for medical attendance. Lisfranc recognized the presence of endometritis and anteversio uteri in 1842. By antiphlogistic treatment, and application of caustic in substance, great relief was afforded in three months; still a sensation of heaviness in the lower abdomen, fluor albus, and a weakness in the right leg, remained. In 1852 these symptoms increased considerably. Cullerier found hypertrophy of both uterine lips and ulceration of the cervical canal. He applied the ferrum candens and nitrate of silver, after which the sufferings increased and the menses disappeared. Both legs grew weaker, and walking was almost impossible. When Dr. Nonat was consulted, in 1852, she was unable to walk alone; the right leg was perfectly paralyzed, while the left one was constantly trembling. The pains in the abdomen were violent, and the white discharge very copious. During menstruation, the pains and the paralytic state of the lower extremities decreased. The above named morbid condition of the womb was confirmed. By repeated venesections, cupping, and application of the uterine sound, the disease of the womb was so far removed that the paralysis of the legs was also cured, and the patient was enabled to walk perfectly straight.

2. *Dr. Bernard on injections of carbonic acid gas in treatment of diseases of the womb, and their influence upon the system* (*Archiv. générales*, Nov., 1857).—The application of carbonic acid gas in cases of painful uterine disease, as recommended by Drs. Hardy and Simpson, has been tried and found successful by the author in several instances. He records eight cases, four of carcinoma uteri far advanced, and four of a simple congestive but very painful character. In almost all of them the carbonic acid gas had an anæsthetic influence, without producing any alarming symptoms, with the exception of one case. The mode of application is very simple; a bottle, the cork of which is pierced by an elastic canula, is filled with 25 grammes of bi-carbonate of soda, and 20 grammes of bi-sulphate of potash, with a sufficient quantity of water. The development of the gas begins immediately, which is brought up to the diseased portion by means of the elastic tube.

The *first* case proves much in favor of these injections. The patient suffered from carcinomatous ulcerations of the neck, with a fœtid discharge and violent pains. After application of the gas, the pains not only disappeared entirely, but even the ulcers began to look better, and the patient improved considerably in health, so that she was discharged as cured after two months, because only two or three red excrescences could be detected on the neck when she left the hospital.

The *second* case shows an old carcinoma, with violent hemorrhages and deep ulcerations of the neck, while the body of the womb and the neighboring organs were not affected. In this instance, the gas only showed its anæsthetic influence, having no influence upon the disease itself.

In a *third* case of ulcerated carcinoma, the injections at first stopped the discharge, and diminished the pain; but afterwards symptoms of intoxication were remarked, and when these injections were tried again after some time, they had a very bad influence upon the disease, so that their use had to be discontinued.

The *fourth* case is one of far advanced carcinoma, with violent pains in the lower part of the abdomen, which disappeared very rapidly after the first injections. The disease itself was not influenced in its course.

The *fifth* observation is one of inflammatory induration of the neck, with violent pains. The gas had a local quieting influence, but produced such violent symptoms of intoxication, that its application had to be suspended.

In the *sixth* case, which was similar to the former one, the pains disappeared very soon, and the swelling diminished, but signs of intoxication were observed also.

In a *seventh* case, signs of absorption of the gas were observed, but the pains disappeared, while the ulcerations remained unchanged. The patient remained only a short time under treatment.

Eighth case.—Metritis, engorgement of the neck, violent pains, against which a great number of remedies were applied, without the least benefit. They disappeared after the first injections.

The anæsthetic influence of the gas only remains a short time, therefore the injections have to be repeated several times in a day.

The first symptoms of intoxication generally pass over very soon, and are weaker with every following application. Only in one instance did the injections have to be discontinued.

It is a remarkable fact, that they were only remarked with those patients who suffered from inflammatory swellings of the neck, never in those affected with cancer. In two cases the disease itself was diminished, once in ulceration of the neck, once in carcinomatous ulceration.

3. *Dr. Scanzoni on a case of death occurring after injection of carbonic gas into the cavity of the uterus* (*Scanzoni Beitr. zur Geburtsk.* B. 3. *Wurzburg*, 1858).—The carbonic acid gas has been applied of late as a local means more frequently, and Dr. Scanzoni himself has proposed its use for inducing premature confinement. The following case, therefore, is of no little interest, and will caution practitioners in the use of a remedy which hitherto has been considered void of danger when locally applied. Dr. S. was called in consultation to see a lady who suffered from an enormous hypertrophy, with prolapsus of the cervix uteri. He therefore recommended the removal of the diseased portions by an operation. The attending physician fully agreed with this proposition, but thought it a good plan to apply a remedy, which, in his opinion, had an influence upon the contraction of the vascular system, in order to lessen the chances of excessive hemorrhage, after the amputation of the cervix. He therefore proposed to introduce the carbonic gas into the cervix uteri for several days. Dr. Scanzoni, though not believing that this remedy would have any considerable influence upon the quantity of blood to be lost after the operation, consented to its application more out of regard to the attending physician. A dried pig's bladder, to which a canula was attached, was filled with the gas, and the mouthpiece introduced into the gaping orifice, and the bladder gently pressed. But scarcely two or three cubic inches had entered the cervix when the patient screamed out, saying, "I feel air entering my stomach, head, throat." These, her last words, were followed immediately by a violent, general tetanus, respiration became very difficult and rattling, the pulse weak and frequent, and notwithstanding everything was done by several physicians present to save her life, she died $1\frac{3}{4}$ hours after the application of the gas.

The post-mortem, two days after death, revealed no pathological condition whatever, besides a far advanced œdema of the lungs. But a pregnancy of four months was discovered, which was not detected during life on account of certain peculiarities of the uterus, for the walls of the uterus were not much thicker than a piece of card-paper, so that it looked at first like a large cyst, filled with water. The hypertrophy generally connected with pregnancy seemed to be restricted to the uterine neck in this instance, and the distance between the external and internal orifice of the womb measured $3\frac{1}{2}$ inches. The ovum was found in a perfect condition. No traces of peritonitis were found, and Dr. Scanzoni is of opinion that the gas must have entered one of the larger uterine vessels.

4. *Dr. E. Rigby describes in the Med. Times and Gaz., of Jan.* 30, 1858, *a peculiar condition of the womb, which he calls the "squatting uterus,"*

where the body of the uterus is too weak to sustain the fundus and the pressure of the intestines upon the latter; it thenceforth must yield in every direction, so that the fundus approaches the orifice. The following symptoms are connected with the disease: pain behind the symphysis pubis, increased by the upright position, extension to the bladder or rectum; the menses are generally very copious. The uterus, upon examination, is found enlarged, of a spherical shape, very soft, while the cervix feels hard, and is short and painful. The probe passes the orifice easily, while its further advance is generally connected with pain; the cavity is found enlarged, and after the fundus has been elevated to its full extent, the probe measures generally 3″ at the external orifice, even in women who have never been pregnant. The patient feels immediate relief as soon as the fundus has been brought to its right position by the sound. The treatment of this disease consists chiefly in the application of general and local tonics, and rest of the body.

5. *Dr. Bonorden on prolapsus uteri and its treatment with internal remedies* (*Preuss. Ver. Zeit.* 2, 1858).—The most common cause of prolapsus being hypertrophy of the womb and relaxation of the round and lateral ligaments, the author tries to remove these morbid conditions by the following treatment: the patient begins to take every day the following powders: ℞ secal. cornut. gr. iii., gummi galbani, gr. x., decreasing the quantity as the disease lessens; at the same time a mistura oleoso-balsamica is rubbed over the mons veneris, the thighs, and vulva several times a day. Two cases are reported in which the treatment proved successful.

6. *Dr. H. Savage.—Short notes on the history and applications of the perineo-plastic operation* (*Lancet*, June, 1858).—After a short historical analysis of the various surgical plans for treating prolapsus uteri (*Marshall Hall, Dieffenbach, Evory Kennedy, Phillips, Desgranges, Fricke, Geddings, Brown*), he proposes his own method, which is a slight but important modification of Geddings's operation, and which was applied successfully in eleven cases. Having, by pinching up more or less of the flaccid vulva, carefully ascertained how much integument may be removed, a flap of suitable size is marked off by a sharp scalpel, and then dissected away, commencing with the skin, and ending with the vagina; the *entire thickness* of which, however, is taken away as far as the perineal fascia, after which the raw surfaces are united by quilled suture, and five or six points of interrupted suture, which are removed on the sixth day.

7. *W. Tyler Smith on a case of complete inversion of the uterus of nearly twelve years' duration, successfully treated* (*Lancet*, June, 1858).—The subject of the present case was delivered, at the age of eighteen, of a first child, and inversion occurred at that time, but was not suspected by her attendant. All attempts at replacing the uterus failed. The patient was sent to the author of the paper, in September, 1856, and symptoms of anæmia existed in the most marked degree. She was subject to epileptiform convulsions and frequent faintings. On examination, the uterus was found to be completely inverted, the neck of the

uterus and the os uteri being very small and rigid; the author determined to attempt its reduction by continuous pressure, with the intention of dilating or developing the os and cervix uteri. With this object, the right hand was passed into the vagina, night and morning, and the uterus squeezed and moulded for about ten minutes at a time. Chloroform, which had been found so useful in cases of inversion of shorter standing, was not used, because of the feeble state of the heart and circulation, and the comparative absence of pain. In the intervals between these manipulations, the vagina was distended, and firm pressure exerted upwards by a large air pessary. These means gradually dilated the os uteri to such an extent as to allow of the partial return of the uterus, and on the eighth day from the commencement complete re-inversion took place. The subsequent recovery of the patient was perfect. She has since menstruated regularly, and is in excellent health.

8. *F. Holst.—Remarks on the treatment of flexions of the uterus* (*Scanzoni's Beiträge, z. Geburtskunde, etc.*, B. 3, 1858).—After a short analysis of the causes, symptoms, and pathology of uterine flexions (ante and retro-flexion) the author proceeds to explain his mode of treating these affections. The treatment must be a general and a local one. In the first cases which came under Dr. Holst's observation, he applied the self-retaining instrument (redresseur) of *Kiwisch-Mayer.*

The introduction of the instrument and the reposition of the womb was never connected with any difficulties. But most of the women under treatment could not endure the presence of the instrument for any length of time. Violent pains, and spasmodic and hysterical disorders followed every protracted application. He therefore diminished the size and elasticity of the two upper arms, by which plan he succeeded so well, that most women could bear it sufficiently in the uterus. But, although he applied it for three or four hours daily, during several months, he could not record one single case of recovery, notwithstanding the simultaneous application of proper internal remedies. He therefore entirely changed his former plan of treating these malpositions, and with far better results. Above all, a course of general treatment was ordered, with a view to strengthen the system and relaxed state of the womb. The remedies used were cold and sea bathing, iron, ergot, and injections of cold water, by means of a strong douche. By making use of these remedies for many months, and even years, the patients became strong and healthy, menstruation regular, without pains, and the fluor albus stopped entirely. Of fourteen patients who were treated in this manner, all derived great benefit, while in two of them also, the local disease (one ante-flexion, one retro-flexion), were entirely cured.

9. *Dr. Ladreit de la Charrière, on the cysts which develop in the walls of the vagina* (*Archiv. génér.*, May, 1858.)—After a short analysis of the literature touching this subject, and a minute anatomical description of the vagina, which presents nothing new, Dr. Ladreit enters upon the consideration of these cysts which are imbedded in the deeper portions of the vagina. They are always situated one inch at least

beyond the hymen, and are considered by most authors to originate from the vaginal follicles, while the author believes the cellular tissue of the vagina to be very often the seat of their development. In other instances they may commence between the muscular layers of the rectum and vagina, or between the bladder and vagina. By microscopical examination he was enabled to prove the absence of an epithelial layer in those more remote vaginal cysts, which is an essential portion of the glands and of those cysts, which are situated in the neighborhood of the vaginal orifice. They are composed of cellular, fibro-cellular, fibro-plastic, and vascular tissue. They result from an inflammation, the deposits of which are not transformed into pus, but into a bursa mucosa. The most favored place of development is the anterior wall of the vagina, and in by far the greatest number of cases parturition, or sexual intercourse had preceded their origin.

As long as the cysts are small, and situated far above the entrance of the vagina, they scarcely give any trouble, and their presence is not noticed by the patients. Some have been found as large as a hen's egg; they are mostly of an ovoid shape, with smooth surface, those originating from one of the vaginal glands have a pedicle, and are movable, and present themselves at times near the orifice of the vulva. Unless they are of considerable size, they do not effect any inconvenience whatever, while at times they give rise to a distressing sensation of dragging, to fluor albus, or dysuria; they even, in some instances, have presented an obstacle to parturition. The liquid contained in these cysts is of a yellow or brown color, and generally contains granular globules, which are composed of simple granulations.

The outer layer of these cysts consists of the mucous membrane of the vagina, which is very much distended and discolored. The inner layer is composed of cellular and elastic tissue, with a vascular stratum, intermixed with a few muscular elements.

These tumors have been mistaken for prolapsus uteri, hernia vesicæ, or recti, tumors of the ovaries, etc. Still, by a minute examination, it is not difficult to come to a right diagnosis.

The treatment of these cysts is the same as that applied in hydrocele, be it by excision or injection of a stimulating liquid.

The article is concluded with the history of five cases.

Report on the Progress of Infantile Pathology and Therapeutics; prepared for the NEW YORK JOURNAL OF MEDICINE. By A. JACOBI, M. D., Physician to the Children's Department of the (Canal street) German Dispensary of the city of New York.

I.—DIGESTIVE ORGANS.

1. *Retropharyngeal abscess.*—The very best essay on this important disease of the infantile age, as yet published, is from Dr. Bokai (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p. 183). The main points of his valuable expositions are the following facts: Retropharyngeal abscesses may be classified under three heads. Some

are developed idiopathically, from an inflammation of the pharynx, and the surrounding cellular tissue, the inflammation taking its origin from either a catarrhal affection, or a metastatic process, under the influence of an acute exanthem, typhus, pyæmia, etc. Another class are secondary, being produced by the suppuration of inflamed lymphatic glands of the neck. The third class owe their origin to the suppuration of cervical vertebræ, or their ligaments. The first class occurs in the majority of cases before, or at the time of the first dentition, this period of life being most subject to idiopathic catarrhal inflammations. The second class are more frequently found about the time of the second dentition, which is most favorable to inflammations of the lymphatic glands, as produced by scrofula. The third class belong, in their majority, to the same age; inflammation, tuberculous as well as traumatic, being uncommon at an earlier period. The prognosis in cases of the first class is generally favorable, unless the incision of the abscess be neglected; with the only exception of metastatic abscesses, which are but symptoms of a more or less grave affection of the whole system; in these cases everything depends on the possibility or impossibility of a cure of the morbid crasis of the blood. The cases of the second class are not unfavorable, although they be only secondary, because there is always a hope that a rational treatment of the general disease will be successful. The prognosis of the third class is most unfavorable; for there is only a momentary relief after the abscess is opened, either artificially or spontaneously. The treatment is to be modified according to individual cases. Idiopathic abscesses, when in their beginning, require a rational antiphlogistic local application of cold, either externally or by gargling, with, or without alum; local application of alum or nitrate of silver, leeches, scarifications of the pharynx. When the inflammation cannot be kept from further development, warm poultices will be found preferable; they may be left away, and warm emollient gargles given instead, where congestive cerebral symptoms prohibit their further application. Internal treatment is not of much use, except in moderating the fever, cerebral symptoms, etc., especially the tartar-emetic is not deserving of its general warm recommendations. Where the symptoms are grave, and suffocation imminent, undoubtedly the safest and quickest remedy is incision, after which the abscess is to be washed out by gargling or syringing. Metastatic abscesses require incision only where the symptoms are very grave. After it has been made, water would not be sufficient for cleansing and healing the wounds, but stimulants, astringents, and roborants are always required, such as chloret. calc., alum, nitr. arg., tann. ac.; also, the internal treatment has to be modified by the general morbid affection, and bark, mineral acids, etc., will often be found necessary. Secondary abscesses of the second class above mentioned, require the same local treatment as idiopathic ones. Where an external abscess originating from glandular inflammation is diagnosticated, it has to be incised from outside, in order to prevent, if possible, the formation of a retropharyngeal abscess. At all events the treatment after the incision of a retropharyngeal abscess of this class will take the more time and care, the graver the general glandular disease, and the severer the dyscrasic dissolution of the blood. Iod potassii., iod. ferri, and cod-liver oil will often be required. The cases of the third class, offer a large number of indications, but are much less hopeful. Quiet position, application of cold, leeches, ointments of mercury and iodine, calomel, nitr. potassæ, tart. em., iod. potassii, iod. ferr., are indicated, and have been used and abused. The incision ought to be made as late as possible.

2. *Catarrh and follicular ulceration of the intestinum crassum.*—Prof. Clar, of Gratz, publishes in the *Jahrb. für Kind. und phys. Erz.*, 1858, iii. and iv. several essays on the pathology and therapeutics of some of the most important diseases of the infantile intestinum crassum, of which the following is an extract: Catarrhal diarrhœa, during dentition, especially where some cerebral or pulmonic affections are present, ought not to be suppressed as long as a derivation is desirable, and the child does not suffer from impaired nutrition. If such is the case, or a catarrhal diarrhœa is continuing, without symptoms of difficult dentition, injections of salep, starch, alum, tannic acid, with a small quantity of opium, are indicated, together with the internal use of ipecac., tinct. cat., ratanh. Injections, sometimes emollient, sometimes astringent, have also to be employed in the protracted catarrhal affections of the int. crassum, in anæmic, scrofulous, rhachitic children; most successful are injections of solutions of tannic acid or nitrate of silver. In general it may be stated, that Prof. Clar lays more stress on the importance of injections in infantile diseases than has ever been done. His desire to publish his experience, and to recommend such a simple mode of administering medicaments in diseases of the lower intestines cannot be too much praised. Children with follicular ulceration range from some months to some years of age; they are anæmic and atrophied, their hands and feet infiltrated with serum, as well as their cerebrum, the repeated œdema of which is a usual cause of death. There is bronchial and pulmonary catarrh, sometimes the lungs are œdematous, but in the majority of cases, full of air, and bloodless; the liver is somewhat enlarged, filled with serous blood, the spleen pale and small, the mucous membrane of the stomach and intestines covered with a tough and viscid mucus, and in some parts of a greyish color; on the mucous membrane there are the peculiar solitary and bluish spots (almost similar to pale sugillations), which show, in their centres, small ulcerations, with the follicle somewhat excoriated, and of a looser tissue, sometimes even without a follicle being present at all. The progress of this disease is, generally, this: The first cause has been bad food, and insufficient care; pulmonary and bronchial catarrhs, of great obstinacy, impaired the sanguification; the catarrh and follicular ulceration of the int. crassum accelerated the consumption of blood and strength, and finally, the cerebral or pulmonary œdema, or both, resulting from the great exhaustion, produced death by means of cerebral or pulmonary paralysis.

3. *Atrophia enterica.*—Infantile marasmus is the consequence of a great number of organic diseases. The one consequent on chronic intestinal complaints is distinguished by Dr. Ignaz Lederer (*Wiener Medicinische*

Wochenschrift, 1858, No. 16), from the one following on tubercular degenerations of the mesenteric glands, etc. The causes of enteric atrophia is either a simple chronic internal catarrh, or follicular catarrh, or enteritis choleriformis (cholera infantum), or, in a very few cases, dysentery, of which infants in early age usually die in an early stage. Extreme emaciation, diarrhœa, pain and sleeplessness, are the most common symptoms, besides most craving thirst and hunger. These are of a diagnostic importance, being not found in the other kinds of marasmus; nevertheless the stomach and intestines are not sufficiently powerful to digest. Absence of fever is characteristic, so much so, that feverishness is usually a prodrome to cerebral or other complications, of which the most common are: cerebral or pulmonary stasis, otorrhœa, tumefactions of the glands, abscesses, furuncles, and pertussis. Milk is not always tolerated, and is seldom so in large cities. Lederer then prefers to give beef-tea, without spice, but with some sugar; sometimes, where diarrhœa is present, with rice water. Veal soup generally causes or aggravates diarrhœa.

4. *Colitis crouposa.*--Prof. Clar (*Jahrb. f. Kind. u. phys. Erz.*, 1858, iv. p. 220), gives the following particulars. Colitis crouposa must be suspected wherever a young and feeble infant is suffering from a diarrhœa, which shows neither the catarrhal nor the dyspeptic characters. The evacuations are mixed with small points and stripes of blood and exudated matter, even pseudo-membranes; the pain is manifestly following the direction of the colon; urine is easily passed, although the symptoms may be similar to those of cholera neonatorum. Moreover, it is to be kept in mind, that a genuine dysenteric process, producing similar excretions, occurs but very seldom, if at all, in so early a period of life. Whenever the colitis is idiopathic, and not the consequence of pyæmia, local treatment appears to be most successful. Injections of cold water, or emollient liquids, with or without laudanum, and in severe cases, from a quarter of to a grain of nitrate of silver, dissolved in two or three ounces of water, form the better and principal part of the medical treatment.

5. *Dysentery.*—Prof. Clar (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p. 223), describes three different classes of dysentery, of which one may be, in some cases, only a preceding or consecutive stage of others. There is, 1st, a light erythematous dysentery; 2d, a graver inflammatory affection of the mucous membrane; and 3d, a grave inflammation of the mucous membrane with simultaneous exudation in the sub-mucous cellular tissue, and sometimes inflammation of the muscular tissue and serous membrane. Dysentery, although often occurring epidemically, is rarely observed in the first year of life. Its characteristics are a peculiar excretion of a viscid mucus and yellowish, reddish, bloody, chocolate-colored, even black and gangrenous, fœtid masses; tenesmus; sensibility of the rectum; high color of the orificium ani; collapse; a peculiar expression of the physiognomy, corresponding with the grave abdominal affection, and, in a large number of cases, pain following the course of the colon ascendens, transversum and descendens The erythematous form of dysentery is rarely observed before, usually after, the third year of life; its symptoms are less severe, but

not a few cases occur which lead to rapid death, although the progress of the disease seems slight and mild. Medicaments, introduced by both stomach and rectum, must vary according to the individual case. Emollients and sedatives, sometimes narcotics, will do good in many mild cases. Injections of nitrate of silver, injections of cold water, or of both of them alternately, cold applied to the external surface of the abdomen, sometimes warm poultices, will be found to act successfully. Prof. Clar does not seem to think much of calomel, but very much of antacids. In no disease is it more necessary to individualize, than in dysenteric affections; for now the inflammatory, then the septic character will be predominant; sometimes mild dysentery will be accompanied by the most excruciating attacks of colic; in midsummer, congestion, even metastatic inflammation of the liver, will go along with it; and again, rheumatic affections of the peritoneum may aggravate the number of even slight symptoms of the disease.

6. *Paralysis of the sphincter of the rectum.*—Prof. Clar remarks that (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p. 228) temporary or persistent paralysis of the sphincter is usually observed in children of from eight to twelve years of age, and occurs after exhausting diarrhœa of long standing, after long and continued irritation by worms, and sometimes without any manifest cause. The patients drop their excrements, solid or liquid, while walking. The orificium ani shows a large opening. Cold and copious injections ought to be given and often repeated, and after an evacuation has been effected, a small injection of a solution of tann. ac. in water, with some tinct. nuc. vom. The same treatment may be resorted to in paralysis of the sphincter, complicated with prolapsus recti, after reposition has been performed.

7. *Constipation.*—It cannot too often be stated, that there is nothing more dangerous to children than repeated laxatives. They operate once, but only to leave the bowels more subject to constipation than ever. Prof. Clar (*Jahrbuch für Kinderheilkunde und physische Erziehung*, 1858, iv. p 230) gives two indications, which are to be fulfilled by stimulation—1st, of the intestinal mucous membrane; 2d, of the action of the intestinal muscular fibres. The first is effected by injections of soap, sulph. magn., sulph. sod., chloret. sodii, dissolved in water; where any contra-indication forbids the injection of salts, injections of sugar and water will be found useful. In order to stimulate the muscular fibres of the intest. crassum, he recommends dec. tarax., dec. gramin., with an addition of tinct. colocynth, tinct. rhei aq., tinct. rhei vin., tinct. aloes, or a mild inf. rad. jalap. or inf. fol. senn. [Wherever, for the last few years, I have met with obstinate constipation in infants, I generally succeeded in giving speedy and full relief by ordering some sweet sugar-water to be taken every day, besides the breast. I am satisfied, that the chief cause of constipation in nurslings is the insufficiency of sugar in the breast-milk, the proportions of which are, naturally, not the same with every mother. Wherever caseine exceeds the proportion of the other parts of the milk, it becomes indigestible by a relative want of lactic acid in the contents of the stomach and intestines. A. J.]

II.—RESPIRATORY ORGANS.

1. *Tracheotomy.*—Dr. H. W. Fuller publishes in the *Medico-chirurgical Transactions*, vol. lx., 1857, seven cases of tracheotomy, performed for croup, three of which terminated successfully. He then enumerates 23 operations of tracheotomy performed in England, including his own, nine of which were successful. (Since the appearance of Dr. Fuller's paper, five additional cases have been published, of which three had a favorable result.) There is no doubt, then, that this operation is productive of a great saving of life. But the author is opposed to its early performance, as recommended by the French surgeons, and disapproves of its performance where the patient has been out of health prior to his attack of croup; if his illness has been preceded by pneumonia or severe bronchitis; if he is suffering from any exanthematic or other disorder; and finally, lays particular stress on the fact, that the operation itself barely admits air and does not remove the disease, which is to be treated as before the operation.—*The Brit. and For. Med.-chir. Rev*, July, 1858. N. Y. ed., p. 80.

2. *Croup cured by cauterization of the larynx, performed by means of catheterism* (*Gaz. des Hôp* 1858, No. 80).—Catheterism of the larynx is, in France, performed by Dr. Loisean. A successful case of his is communicated by Trousseau, who says, that he remembers from his own practice only three cases of genuine croup getting well without tracheotomy, and that, without this operation, the chance of recovery has been that of 1 to 100. The first cauterization was performed by a solution of nitrate of silver, the second by a saturated solution of tannic acid, which Dr. Loiseau thinks to be greatly preferable. Alum and tannic acid, powdered, were blown besides into the pharynx and the nasal cavities.

3. *Instillation of chlorate of soda into the trachea* (*L'Union Méd.* No. 82, *Gaz. des Hôp.* No. 68).—E. Barthez has come, by experiments, to the conclusion, that the local application of a solution of chlorate of soda is more effective in macerating pseudo-membranes, than chlorate of potash. He therefore ordered instillations into the trachea of chlorate of soda gr. j. to iv., and water gr. xxx., after tracheotomy had been performed and the pseudo-membranes were known to spread through trachea and bronchi, and had them repeated every quarter of an hour. Before he made these applications, almost every child died after tracheotomy, because the pseudo-membranes could not be removed from below the canula. Afterwards but very few died. After each instillation, a severe cough used to set in, which always brought up a part of the solution, and some macerated pieces of pseudo-membranes. When he instilled water instead of his solution, the same cough ensued, but nothing but the water was thrown out. [It is remarkable indeed, that these results obtained in the same epidemic, in which by far the greater number of patients died after the operation without succeeding instillations. Therefore the remarks of Mr. Seé, in the session of March 24th, of the Société Médicale des Hôpitaux (*L'Un. Méd.*, No. 82, p. 328) are not to the point, when he reminds Dr. Barthez of the fact, that the mortality changes with the year and the genius epidemicus.

A. J.]

III.—NERVOUS SYSTEM.

1. *Mental alienation* (*Bull. Gén. de Thér. Méd. et Chir.*, 1858, liv. p. 556). Brierre de Boismont made the following remarks in the "Institut." Mania, or rather "perversion of instincts with exaltation," is most frequent in young patients. Of 30 cases, the antecedent history of which could be learned, there was in 18 an hereditary disposition. The parents, besides attacks of insanity, were of an extremely sensitive and eccentric character. The children born of them were sometimes of an extremely melancholy, sometimes of a highly gay turn of mind, always changing in their disposition. In the 42 patients observed and recorded by Brierre de Boismont, insanity became manifest towards puberty. The influence of these hereditary transmissions appears to be almost unknown to educators; the author declares himself satisfied, that in many cases insanity is the consequence of this ignorance. The prognosis is unfavorable. Nearly half of the number of patients were registered as being cured, sometime or other, but there were a number of relapses, changes of character and temperament in such a degree, as to disable the patients to take a position in life and follow a business.

2. *Tartar emetic in chorea* (*L'Union Méd.*, 1858, Nos. 76, 77, 78; *Gaz. des Hôp.*, No. 80).—Roger publishes 12 cases of chorea treated after the manner of Gillette, who recommends the following treatment. He gives tartar emetic in nothing but sugar-water, and to children of from 7 to 14 years of age, in nearly equal doses. The first day, 20 centigr. of tartar emetic are given in 100 grammes of sugar-water; of this solution the patient will take a spoonful every hour, until severe vomiting or diarrhœa will ensue. It is better tolerated on the second day, when 40 centigr. are given, and on the third, when 60 centigr. are taken. Meanwhile the symptoms of chorea have become slight, and the pulse has diminished in number: at all events, medication is stopped for some days; if it has to be repeated, the doses are of 25, 50, and 75 centigr. A third term, instituted after the same principle, would require doses of 30, 60, and 90 centigr. of tartar emetic in 100 grammes of sugar-water. Of Roger's twelve cases nine recovered rapidly, two felt only short ameliorations, in one the treatment failed completely.—A case of a young man of 18 years of age, in whom tartar emetic failed to effect a cure, is reported in *Gaz. des Hôp.*, No. 74.

3. *Dispersed congenital sclerosis cerebri* (*Gaz. des Hôp.*, 1858, No. 74).—Dr. Legroux reported in the *Société Médicale des Hôpitaux* the following case: A woman, whose eight children had been still-born, gave birth to a ninth, who appeared to be of good health. On the fourth day, the child was found dead in the arms of the mother. The post-mortem examination gave the following results: The cerebral membranes were entirely normal; so was the cerebral substance in its greater part. But on a certain number of points it looked somewhat greyish, and contained about ten small and hard tumors, of 0.01 centim. in diameter, which were dispersed in the cerebral substance, and could not be separated therefrom by enucleation. Under the microscope, they were shown to consist of fibrous tissue, which is never found in a normal cerebrum, of amorphous granular matter, and of a special alteration of the peculiar nervous tissue. The heart was filled with black and vis-

cid blood. Within its texture, especially in the tendinous columns of the left ventricle, there were small tumors of a yellowish white color, looking very much like the cerebral tumors. The lungs were found to be pressed towards the vertebral column, and to be of a black color, with the exception only of the anterior quarter of the left lung, which was of the usual pink color, crepitated and contained air.

4. *Spina bifida.*—A case of spina bifida in a new-born child came under the observation of Dr. W. A. Green (*South. Med. and Surg. Journ.*, July, 1858.) This deformity is rarely uncomplicated, but the complications in this case are somewhat interesting. There were "two appendages to the sac, resembling the mammæ of women; a large hernia between the umbilicus and the symphysis; some small openings through which the urine was continually trickling, but which could not be followed up by the probe; the testicles, 'perfectly formed, were hanging pendent from the middle of the symphysis pubis;' there was no penis, the anus was complete and perforate at the extreme anterior portion of the perineum, next to the symphysis; at the point of the os coccygis was another anus, which proved to be a cul-de-sac."

IV.—UROPOIETIC ORGANS.

Congenital extroversion of the bladder usually occurs in male infants, combined in the majority of cases, with fissure of the urethra on the dorsal surface of the penis. Mr. Curling (*London Lancet*, Am. ed., Aug., 1858, p. 141) publishes a case of this malformation occurring in a female infant. There was a defect of the symphysis pubis, and an absence of the anterior commissure of the labia and clitoris. An opening was present in what appeared to be the mucous membrane of the anterior wall of the vagina, which might be either the meatus urinarius, or the entrance of the uterus. Two smaller openings were present, one on either side of this, which might be either the seminal ducts, or else the fallopian tubes. A slight prominence on either side of the supposed vagina represented, to some extent, the nymphæ. There was no scrotum nor testes.

V.—SKIN AND SENSORY ORGANS.

1. *Hemeralopia cured by azotic vapors* (*L'Union Méd.*, 1858, No. 78).—A boy of ten years of age suffered from hemeralopia, without any manifest cause. No rational indication being present, Deval tried a remedy much recommended by Dupont, and much used amongst the people; he exposed the eyes twice a day, for ten or fifteen minutes each time, to the evaporations of a boiling cow liver. The child got well in a few days (*Dupont mém. sur la goutte sereine nocturne épidémique*). The same remedy is much used by the Chinese (*Dictionnaire de l'Industrie*, Paris, 1795, tom. iv.).

2. *Sclerema in new-born children* (*Bull. de thér.* 15 June, 1858).—Dr. Legroux reports two cases of sclerema neonatorum, which was speedily removed, in the course of some days, by kneading of the body ("massage"), passive motions of the muscles and artificial respiration.

VI.—DYSCRASIC DISEASES.

Infantile Syphilis.—The main points of a lecture, published by Langston Parker, in the *London Lancet*, Am. ed., August, 1858, p. 90, are the following: A father having symptoms of constitutional syphilis at the time of marriage, or at periods more or less remote before it, may procreate a diseased infant, and the mother may never exhibit any symptoms of disease. The explanation of these cases appears to be, that the ovule is impregnated with diseased semen, and its product is consequently diseased. The chances are in favor of the child escaping, if the outbreak of disease has been very violent; *i. e.* if the skin has been loaded with eruption, or again, if the patient have been submitted to a prolonged and energetic treatment. The mother sometimes retains her immunity, but in a number of cases does not; in such cases, the mother derives her disease from the fœtus, a proof whereof is the fact, that the symptoms of syphilis in the mother very frequently disappear after abortion or delivery, even without treatment. Some even assert the mother to get diseased, sometimes, from the seminal fluid alone. The mother may be the source of disease to her fœtus, or infant, in four ways: 1, she may be diseased before conception; 2, she may become diseased after she has conceived; 3, she may disease her infant in its passage through the vagina, or 4, after birth. Where the father impregnates the fœtus with diseased semen, the infant, having been developed in the womb of a healthy female, will usually be cured; a cure is probable also in an infant, whose parents were both healthy before its birth, but whose mother was diseased afterwards, and communicated the disease to her offspring. Where the infant is conceived and developed in the womb of a mother diseased before conception, the prognosis is most unfavorable.

EDITORIAL.

The Academy of Medicine.—This association of the medical profession in our city is making commendable advances in fulfillment of the noble objects of its original organization. Its well-adjusted machinery of *Sections* is working admirably, and the stated meetings of the Academy are steadily increasing in practical importance and interest. In addition to the continued presentation and discussion of such practical papers as that on Prolapsus of the Funis, by Dr. Thomas; Dr. Dalton's, on the Anatomy of the Placenta, and Dr. Bacon's, on Yellow Fever (which we publish in this number of the Journal), the discussions on Puerperal Fever, the Anatomy and Pathology of the Prostate Gland, and a variety of similar themes engross and overrun the time of each session.

The Academy should occupy a position and earn a reputation second to no other medical body in the world; and with a continuation in its present career, its discussions and transactions may soon fully equal those of the Royal Medico-Chirurgical Society, or the French Academy.

The revision of the Constitution and By-Laws, now in progress, will, we trust, remove every obstacle to the exclusive occupation of the time of the stated meetings with strictly scientific discussions. The noble *animus* and zeal of the present venerable President, Dr. Batchelder, have done much to promote the interests and to perfect the present improved organization of the Academy. The several *Sections* are now, by their efficient labors, bestowing upon their originator honors even higher than those conferred by presiding over their combined deliberations.

In his inaugural address before the Academy, Dr. Batchelder very happily referred to the practical working of the *Sections*, and also pointed out the duties, influence, and special improvements which the interests of the profession in our city now demand of this body, particularly specifying the necessity of providing a suitable hall and rooms for the stated sessions of the Academy and its several sections. To this very important recommendation, so strongly urged by the present worthy President, and by his predecessor, Prof. Parker, we desire to add our earnest recommendation that a plan be immediately perfected for the founding of a great central medical library and reading-room, which will not only render such a local habitation for the Academy a *necessity*, but become the means of effectually perpetuating its organization as a scientific association, while it provides essential requisites for elevating and cementing the entire profession in the metropolis of our country.

The common interests of our profession, and of science, demand much of the New York Academy of Medicine. In the language of the venerable President, in his excellent inaugural, "the Academy located in this city and State involves the reputation and character of the profession here and throughout the commonwealth. Much is expected of it, and shall that expectation be disappointed? Belonging to this profession, and unlike any other institution in the land, we should spare no pains to make it what it should be."

Nursery and Child's Hospital.—The new building of the Nursery and Child's Hospital (Fifty-first street, near Third avenue) was inaugurated May 22d, with appropriate ceremonies. From the address of Dr. Delafield, on the occasion, we make the following extracts in regard to this institution:

"The history of the Child's Nursery and Hospital is brief, as its existence has been short. When, on the 22d of June, 1857, the corner stone of this building was laid, in an address delivered by a gentleman who has been unceasing in his efforts in favor of the institution, a touching anecdote was told, which showed the origin of the first thought to which it owed its existence. The story of the neglect and wretchedness of one poor infant, whose mother had been forced to take to her breast the child of another that she might gain a livelihood—the kindness and benevolence of an excellent woman in heart and feeling, although not in name, a true 'Sister of Charity,' exerted towards this infant, which rescued it from utter destitution and misery;—this story, told to one of those who would be among you on this occasion if she were not herself on the bed of sickness, awakened a feeling of active benevolence which has unceasingly urged her on, with the excellent ladies, her associates, until they this day reap the reward of their efforts in the completion of this ample and excellent building, and its dedication to the objects of its erection. On the 1st of March, 1854, the 'nursery for children of poor women' was organized, and soon received its charter from the Legislature. In a few weeks a building was provided for it, and opened on the 1st of May following, and so rapidly was it filled, that larger accommodations became almost immediately necessary.

"The first thought was to form an asylum for the children of wet-nurses, or those who, from any other cause, were deprived of the care of a mother, and for the daily charge of those who were obliged to labor away from their own homes to gain a livelihood. But these children often came into the Nursery already suffering under disease, and frequently of the most severe and dangerous character; or, while in the building, obeyed the laws of infancy, and became the subjects of disease. It at once became evident that the sick must be separated from the well; that physicians and nurses must take them in charge; and that arrangements suited to their condition must be made entirely different from those required by the strong and healthy. The necessity of a 'Child's Hospital,' then, became apparent, and this feature in the new charity soon became so prominent, that it was determined to make it a principal object. Accordingly, on application to the Legislature on the 4th of March, 1857, an act was passed changing the name of the institution to the 'Nursery and Child's Hospital,' and this name it now bears." Interesting and appropriate addresses were also made by Erastus Brooks, Esq., and Dr. Geo. T. Elliot, jr.

The New Island Hospital.—This hospital is to be erected on the site of the building recently burned on Blackwell's Island. From the address of Washington Smith, Esq., President of the Board of Governors, on the occasion of laying the corner stone, July 21, we gather the following particulars in regard to this building:

"The building is to be three and a half stories high, with a steep roof, by which means there is a gain, at a small expense, of a full hospital story, sixteen feet high, lighted by windows between the cornice and dormers, above the cornice. The basement arrangements appear to be complete. The height of ceilings of first and second stories is fourteen feet, third story sixteen feet.

"On each story of each wing there will be in the centre building three wards, each capable of containing twenty patients, and two wards in the wings or transverse ends, each capable of containing thirty-two or twenty-four patients, as may be decided upon; each ward to be provided with a single bedroom for particular cases; water-closets to be separated by wells of skylights from the building proper. There will be two principal stairways and two hoistways for patients. Bells and speaking-tubes will be carried from each ward to the room of the medical staff in the third story of the centre building, and a speaking-tube from the third story of the main building to the office and bedroom of the resident physician. The number of patients that can be accommodated without inconvenience will be as follows:

Four wards in basement, 24 each		96
Six wards in first story, 20 each	120	
Four wards in first story, 24 each	96	
		216
Wards in second and third stories		432
In all		744

"The wards are all laid out upon a plan adopted by a commission in France, after an examination of the principal hospitals in Europe. It is proposed to adopt the general principle of ventilation of the Lariboisière Hospital of Paris, now considered the best in Europe. A general fresh air conductor, fed by a blower from a raised air chimney outside of the building, is carried underneath the basement floor. From this, vertical supply tubes, diminishing in area as they rise, distribute the fresh air in summer, and the heat of fresh air in the winter, to each ward, bath-room, and closet.

"The wards are supplied by horizontal tubes, with vertical pedestals; in each ward these pedestals are covered by perforated plates of metal. The foul air is conveyed from over every two beds of each ward by pipes of glazed earthenware, to the top of the wall, where they are conducted to the foul-air chimneys by tubes of metal. The circulation is produced by coils of steam pipes or stoves in the foul-air chimneys. The heavier gases are taken through openings made around the base of the rooms. It is proposed to force river and fresh water into tanks under the roof by the same engine which drives the blower, and to have hot and cold water tanks at regular distances over the water-closets and baths.

"The outside walls to be constructed of rubble-stone masonry, with hammer-dressed or pointed corners. The outside walls to have an eight inch air-space, and four inch inner or furring wall of brick inside of the interior stone-work."

Tonic Nutritive Wine.—There has recently been brought to the notice of the profession of this city a preparation, in which are combined quinquina and cocoa with Spanish wine. The advantages which it is claimed to possess are an agreeable tonic, combining the virtues of quinquina and wine. It is very highly commended by the leading physicians of Paris, by whom it is now extensively employed. The physicians of this city, who have used this wine, are unanimous in their approval of it. The following extract from *l'Union Médicale* in regard to this preparation will give a better idea of its merits:

"A good preparation of quinquina will forcibly address itself to the attention of the profession, inasmuch as quinquina is one of the medicaments whose employment is most frequently called for in the treatment of diseases. The new combination which we speak of has already been noticed in papers read before the Medical Societies; and some interesting observations upon it have appeared in the medical journals. For our part, having had numerous occasions in our private practice to observe the good effects of this preparation, we feel that it is no less than our duty to make known to our brethren the service it had done for us and which it can do for them. There is no physician familiar with the difficulties of his profession, who does not feel that there is nothing more desirable than to encourage a most widely used pharmaceutical product which has at last been freed from its excessive bitterness. There are no inconsiderable details in medicine ; the smallest improvement may lead to great results.

"At this period we are hardly permitted to prescribe, without unquestionable necessity, a medicament repulsive to the taste. The patient feels that he has enough with his sufferings, without the addition of the impression of pain created by those therapeutic agents whose ingestion is only made possible by an impatient and strong desire to be cured. By all means, the profession should seek to avoid the prescription of repulsive remedies, if they can replace them with preparations which the patient may take without repugnance. Medicine is constantly making progress in this direction, whose importance can be denied by no one, either in the interest of the physician or the patient.

"The *Vin Toni-Nutritif* agrees perfectly, in the extent of its properties, with this actual want. It is wine of quinquina, highly tonic and restorative, not only without bitterness, but even with an agreeable taste. It therefore readily recommends itself to children and to women who are brought with difficulty to take medicines of bitter taste.

"It is understood that this new product can be prescribed in all cases where preparations of quinquina are indicated as a tonic or febrifuge.

"We have ordered it for young children, debilitated by severe diseases, whose convalescence has been prolonged ; these little patients have always taken it with pleasure and sometimes with avidity.

"In the treatment of chlorosis, we have combined it with ferruginous preparations. It was then much preferred to the ordinary quinquina wine.

"Uterine affections often require, during and after the local treatment, the use, more or less prolonged, of bitter agents, with the view to reëstablish the altered digestive functions, and to provoke, through a more thorough nutrition, the restoration of the general strength. In several cases of this kind, we have substituted the wine with quinquina and cocoa for bitters of various sorts which were taken with great repugnance ; in every instance the wine was taken with pleasure, on account of its agreeable taste, while its favorable effects upon the system have been marked and decided."

Wood-cut Illustrations.—So frequently are medical men deterred from obtaining illustrations of interesting external diseases, or pathological specimens by the great expense and annoyance attending them, that we are constrained to call the attention of the profession to the method of photographing on wood as practised by Waters & Co., 90 Fulton street. By this process the impression is taken directly upon the wood, thus not only avoiding the expense of drawing, but insuring the greatest accuracy and the greatest dispatch in its execution. They will visit hospitals, or patients, to take their impressions if necessary.

For specimens of their work we may refer to the wood-cuts of this Journal for the last year.

Death of Henry A. Ford, M.D.—At Baraka, Gaboon River, West Africa, Feb. 2. Dr. Ford was a native of the State of New York, and he was a graduate of the University Medical College in this city. He was a man of great energy and untiring industry, an accomplished and eminently successful physician. His professional career, though brief, has been one of great usefulness.

Dr. Ford went out to the western coast of Africa in the year 1850, to labor as a missionary physician in connection with the mission stations in the vicinity of the Gaboon—a wild, paludal region, where, of course, the material fevers of the coast are persistent and of a pernicious type.

In the treatment of those fevers he soon acquired a degree of skill, boldness, and experience that rendered his services invaluable to the foreign residents and visitors there. Some of the results of his observations and experience in that field were communicated to this Journal in an elaborate and practical paper on the Fevers of Africa. (See vol. xv., n. s.) That essay, with an addition of valuable suggestions to persons visiting the coast, has been republished, and it constitutes a little volume of great practical value to the foreigners who may visit or reside in that favorite haunt of fatal malaria.

Dr. Ford has also made some contributions to our knowledge of the natural history of equatorial Africa, among which may be seen in the Museum of the Academy of Natural History, at Philadelphia, a finely prepared skeleton of that rare and but recently discovered giant of the Simia—the *trogladytes gorilla*, or the "ugeni." But Dr. Ford's arduous duties did not allow him much time for the study of the natural history of the unexplored regions that he occasionally traversed, and whose virgin wilds were very attractive to him as a lover of nature.

This lamented and worthy physician performed an immense amount of labor in Africa, and by strict adherence to his own judicious rules of hygienic regimen, prophylaxis, and therapeia, he was enabled to enjoy in that insalubrious climate nearly seven years of remarkable health and vigor. But during the few weeks preceding his fatal illness, he had undertaken very arduous labors in the construction of an improved dwelling-house, which with the exposure and fatigue of a long journey into the interior in an open boat, added to the care of sick associates, prostrated his hitherto strong vital energies, and invited the fatal attack of malignant fever that terminated his life of noble Christian benevolence and usefulness. Truly did he say in his Essay on African Fevers—"*Eternal vigilance is the price of health in Africa.*"

Yellow Fever—Quarantine: *Destruction of the Quarantine Buildings by a Mob.*—The New York Quarantine—its uses, abuses, and the ruthless burning of all hospital and other buildings pertaining thereto, have suddenly become the exciting topics of the day. As this number of the Journal is going to press, the last combustible structure at Quarantine is being burned to the ground.

By these barbarous acts of incendiarism it is possible that the citizens of this metropolis, and the people of the State of New York, may be aroused to some proper sense of the importance and the practical bearings of the various and vexed questions relating to our Quarantine system. "It is an ill wind that blows no good," and if this daring act of the people of Staten Island could be the means of rectifying the abuses of Quarantine at this great entrepôt of American commerce, and could such riotous proceedings become the means of procuring the establishment of a rational and efficient *sanitary system* for the port and city of New York, this terrible experience were cheaply earned, though it is likely to cost the State nearly a half million dollars.

We have not time for comments on this unparalleled and inhuman firing of hospitals. With pain we have looked upon the strange scene of fever patients dragged forth from their comfortable wards and exposed without shelter in the open air, while the edifices which were erected for their benefit, and for the protection of community from infectious maladies were smouldering in ruins from the torch of American citizens. With shame for the medical profession, and humiliation for the boasted intelligence and social and civil superiority of the Empire State, are we compelled to acknowledge that these high-handed, unrestrained and unparalleled outrages against the laws and the dignity of the State are the direct result of the shameless prostitution of the most important responsibilities, executive and legislative to the basest purposes, while Legislators, Governors, and Boards of Health have found ample apology, and sheltered themselves behind the ignorance and dissensions of medical writers on infectious diseases and quarantine.

Difficult as it may be to determine certain questions relating to the sanitary protection of a great commercial city like New York, the time has come when our Quarantine regulations must be established upon some clearly defined and rational basis which will command the respect of the people, and *actually* guard the public from imported infection.

The events affecting the question of the imported origin of yellow fever in the port of New York, and in the vicinity of the Quarantine station, this season, as in past years, have been peculiarly definite and instructive. The cases in New York and Brooklyn, thus far, have occurred only in persons employed on the cargoes of vessels from infected ports, or in the work of cleansing and repairing such vessels.

On the eastern shore of Staten Island the infection of the fever is believed to have become localized at two or three distinct and widely separated points. Some twenty cases have occurred, and about one-third the number have died with black vomit.

The number of sick seamen admitted to the hospital from infected vessels has been unusually large, and several stevedores, shipkeepers, and other employees on such vessels in Quarantine, have been brought into the fever wards. The U. S. steamer "Susquehannah," which arrived with yellow fever from the Gulf of Mexico, early in the season, has visited death upon a large proportion of all unacclimated persons who have visited that vessel since her arrival; and other vessels, without cargo, have proved to be similarly infected.

No other port in the world presents equal facilities for the successful study of those laws that govern the great scourge of the American topics as a transportable infection. Here at the periphery of that variable zone, within which the infection of yellow fever may be reproduced and yield its fatal fruits, all the facts relating to introduction and diffusion among us are replete with interest, and from them may eventually be evolved the laws which govern the etiology of the disease that has baffled the closest study from the days of Chisholm, Rush, Pym, and Bayley.

The New Sydenham Society of London.—This Society was organized on the basis of the old Society which recently ceased to exist. The publications of the former Society, which embraced works inaccessible to the profession at large, form a series of great interest, both for their historical and practical value. The regret which was felt at the failure of this organization is relieved by the rise of this new Society, whose publications are to embrace a much larger number of works, and those of more recent date. Subscriptions are solicited in this city by Dr. Heywood, the local agent of the Society.

New Medical Periodicals.—*Journal of Physiology.*—We have received the first number of this Journal, edited by Dr. Brown-Séquard. It contains 214 pages, more than half of which are devoted to original memoirs. It fully sustains the high character which the name of its projector had led us to anticipate.

The Pacific Medical and Surgical Journal.—This is the title of a new and enterprising monthly Journal, edited and published by Drs. John B. Trask and David Wooster, of San Francisco, Cal. The first number was issued in January. It is well printed, expensively illustrated, and, in its literary character, does great credit to the profession of that State. Subscription price, $5 00 a year. It may be obtained of Baillière.

Oglethorpe Medical and Surgical Journal.—This is a new bi-monthly Journal, issued at Savannah, Ga., by Drs. H. L. Bird and Holmes Steele. It consists of 64 pages, and is afforded at $2 00 a year.

The Savannah Journal of Medicine.—This work is also a bi-monthly, of 72 pages, and is issued from the same city as the preceding Journal, and at the same price. It is under the editorial management of Drs. J. S. Sullivan and Juriah Harriss, with whom is associated Dr. R. D. Arnold.

Maine Medical and Surgical Reporter.—We have received the second number of this new medical periodical, published at Portland, Maine. It is to appear monthly, at $2 00 a year, each number containing 48 pages. It is under the editorial management of Drs. Cummings and Richardson.

Medical Journal of North Carolina.—This Journal appears under the auspices of the State Medical Society, edited by Dr. Edward Warren.

Medical Instruction in the City of New York.—As the season approaches for the annual influx of students to this city, we desire to call attention to the announcement of the several schools in our advertising sheet. At no former time has this city offered greater inducements to medical students who are in pursuit of thorough didactic and clinical instruction.

PUBLICATIONS RECEIVED.

Bucknill (J. C.) and Luke (D. H.) A Manual of Psychological Medicine, containing the history, nosology, description, statistics, diagnosis, pathology, and treatment of Insanity. Philadelphia: Blanchard & Lea. 1858.

Lallemand (M.) A Practical Treatise on the Causes, Symptoms, and Treatment of Spermatorrhœa. Third American edition, to which is added, On Diseases of the Vesiculæ Seminales, and their associated Organs. By Morris Wilson, M.D. Philadelphia: Blanchard & Lea, 1858.

Morris (Caspar) An Essay on the Pathology and Therapeutics of Scarlet Fever. Philadelphia: Lindsay & Blakiston, 1858.

The Uræmic Convulsions of Pregnancy, Parturition, and Childbed. By Dr. Carl R. Braun, Professor of Midwifery. Vienna: Translated from the German, with notes, by J. Mathews Duncan, F.R.C.P.E., Lecturer on Midwifery. New York: S. S. & W. Wood, 389 Broadway, 1858.

Report of a Committee on Dr. Lovejoy's alleged New Remedies. Published by vote of the Monroe Co. Medical Society, Rochester, June 9, 1858. [*Dr. Lovejoy, a member of the Monroe Co. Med. Soc., issued a circular claiming to have discovered certain new remedies, which were proved by this Committee's investigations to be worthless or well known compounds. They very properly condemn the author for holding a proprietorship in remedies.*]

Proceedings of the Sixty-sixth Annual Convention of the Conn. Medical Society, May 1858, with a list of members. [*This volume contains the address of the President,* DR. CATLIN; *reports of several committees; and papers on puerperal Convulsions by Dr. Lindsley; A sketch of Human Embryology, by Dr. C. L. Ives; The Surgical diseases of the Rectum, by Dr. L. S. Paddock*; *with biographical notices of Drs. Wm. C. Williams and John S. Peters.*]

Annual report of the Secretary of State in relation to the statistics of the poor, made February 1. 1858. [*This is a valuable statistical document, which should have a wide circulation among tax-payers.*]

Transactions of the Twenty-ninth Annual meeting of the Tennessee State Medical Society, held at Nashville, April 6, 1858. [*This volume contains, in addition to the proceedings of the Society, the following papers: How does chloroform cause death? by Dr. T. L. Maddin; Account of a patient who swallowed a set of artificial teeth, by Prof. Eve; Case of disease of the cerebro-spinal centres, characterized by constant hiccough, followed by death. by Dr. L. M. Woodson; Obstetric Medicine, by Dr. W. P. Moore; Traumatic tetanus, treated with opium, by Dr. C. K. Minston.*]

On the comparative use of the Ergot and the Forceps in labor. By B. Fordyce Barker, M D., 1858.

Nineteeth Annual Report of the Board of Trustees and Officers of the Central Ohio Lunatic Asylum, to the Governor of Ohio, for the year 1857. Columbus: 1858.

Cheoplastic Process, an Improvement in Mechanical Dentistry.

The Physician's Hand-Book of Practice and Memoranda for 1858. By Wm. Elmer, M.D, and Levi Ruben, M.D. New York: Stringer & Townsend. 1858.

Essays on the Secretory. and the Excito-Secretory system of Nerves, in their relations to Physiology and Pathology. By Henry Fraser Campbell, M D. Philadelphia: J. B. Lippincott & Co.. 1857.

Twenty-first Annual Report of the Trustees and Superintendent of the Vermont Asylum for the Insane, August, 1857.

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THE NEW YORK
JOURNAL OF MEDICINE
FOR NOVEMBER, 1858.

PART FIRST.
ORIGINAL COMMUNICATIONS.

Art. I.—*Case of Aneurism of the Femoral Artery for which Ligatures were successively applied to the Femoral, Profunda, External and Common Iliac, occurring in the New York Hospital during the service of* Dr. Gurdon Buck. Reported by George F. Shrady, M.D., Assistant-Surgeon to the New York Hospital.

The patient, Wm. Allen, 40 years of age, a native of Virginia, was first seen June 6, 1858, by Dr. Chas. K. Briddon, to whom I am indebted for his history up to the time of his admission into the hospital. The patient was a mulatto, married, and the father of a family; of spare habit, tall stature, and wore the aspect of one addicted to dissipation; and at the time he was seen by Dr. Briddon, he had suffered considerably from want of sleep and profuse sweats, attended with an occasional febrile action. A month previous to that time he (the patient) first perceived a pulsating tumour in the middle third of the left internal femoral region; this rapidly increased, and soon produced the usual effects of pressure, pain and œdema of the parts below. He was unable to assign any cause for the appearance of the swelling except a slight injury he received a year previous from a blow on the post femoral region of that side by a cart-rung.

The tumor was ovoid in shape and occupied the whole of the middle third of the femoral region, reaching from about four inches below Poupart's ligament to that point where the femoral perforates the abductor magnus muscle; the tumor being raised about an inch and a half above the level of the thigh.

The pulsation was very strong and was evident to the eye at a considerable distance. The thrill communicated to the hand was most marked laterally. Auscultation detected a very loud bruit. Pressure on the proximal side of the tumor arrested the pulsations and bruit.

On the day following, Dr. Buck was consulted. At that time the patient's sufferings seemed to be augmented; and he stated that at 3 o'clock that morning he felt something give way in his thigh, immediately after which the swelling increased in size. It then lost its ovoid shape and diffused itself in all directions; the pulsations were then not so visible to the eye, and the bruit changed its character. The veins of the leg were very tortuous and enlarged. Dr. Buck advised an early operation which was accordingly performed by Dr. Briddon.

At 1 P.M., the following day, the patient was etherized and an incision was commenced two inches below the centre of Poupart's ligament, terminating about over the same. The sub-cutaneous adipose tissue was divided and the dissection carried carefully through the infiltrated tissues down to the sheath; an opening having been made in the sheath, a dissector was introduced and the vessel isolated from its connections with the sheath by this instrument and the handle of the scalpel. The vessel was not disturbed to a greater extent than was necessary to pass the needle under it; but was observed to be much larger in diameter than is ordinarily met with. An unarmed aneurism needle was passed between the sheath and artery from within outwards. When the needle came into view its point was obstructed by a transparent layer of connecting tissue. The finger-nail was used to scratch through this obstacle; at the moment of doing this the wound filled with arterial blood, which issued with a sound that indicated its escape from a large vessel. Dr. Buck pressed his finger into the wound and arrested the hemorrhage, while the blood was wiped away and a double ligature passed through the eye of a needle and drawn under the vessel. One of these ligatures was secured above and the other below the point where it was supposed that the rupture had taken place.

This, however, did not seem to arrest entirely the flow of blood; and, accordingly, while pressure was made with the thumb, Dr. Buck extended the incision upwards, dividing Poupart's ligament, with the lower portion of the tendon of the external oblique, and then by pushing upwards the lower fibres of the internal oblique and transversalis muscles and dilating the parts, a ligature was passed around the external iliac artery at that point where it is about to go under the ligament. This procedure arrested the hemorrhage; but inasmuch as it was not deemed safe to leave him in that situation in his own quarters he was removed to the hospital, where Drs. Parker, Van Buren and Markoe being present, a consultation was held without delay.

The parts were freely explored, the diseased condition of the artery recognized, and, to make everything as secure as possible, another ligature was placed on the femoral near the origin of the profunda and also on the profunda itself. The wound was closed with sutures, and the dressing completed with a compress and spica bandage. The limb was loosely enveloped in cotton.

19th June, eleventh day after operation.—Patient progressed favorably. On the fourth day the coverings were removed from the limb, the natural temperature having returned. The diffuse swelling of the limb steadily diminished, leaving the aneurismal swelling more exactly defined in its limits. No adhesion having taken place, the wound was left to heal by granulation, and had diminished considerably in size. Patient has been taking since the operation a grain of opium every three hours.

At 3 A.M., blood was discovered trickling from beneath the bandage, and before the hemorrhage could be controlled, a quart of blood was lost. Compression was kept up by a pad and bandage till 1½ P.M., when a consultation was held, and it was decided to apply a ligature to the external iliac within an inch of its origin. The operation was accordingly performed by Dr. Buck. On removing the compress and bandage the hemorrhage was slight.

The original wound was extended three inches higher in the same direction. The abdominal muscles were successively divided and the peritoneum brought into view. This membrane was carefully raised from the hollow of the ilium, and the artery was reached at the point where the ligature was to be applied. Crampton's needle armed was passed from within outwards under the vessel, and the ligature was secured. The new incision was brought together with sutures and strap, then a compress and bandage was placed over the whole. Ordered to take a grain of opium every two hours.

25th.—The wound from last operation is healing by the first intention. The granulating surface of the old wound presents a pretty healthy aspect. The ligature from the profunda came away to-day.

On the 27th, the first ligature applied to the external iliac came away; also the ligatures to the common femoral.

29th.—The upper ligature applied to the external iliac came away to-day.

The patient's general condition improved progressively. The limb maintained its natural temperature, the aneurismal tumor gradually diminished, and everything advanced favorably till 5th July, when several slight hemorrhages occurred as follows: at 5 A.M., 7 A.M., and 12½ P.M., each being arrested by the proper adjustment of compresses. The hemorrhage was observed to come from an opening left by the imperfect closure of the last wound.

July 6.—This morning at 5 A.M., a profuse hemorrhage occurred, estimated at about a pint. The exact source of it could not be ascertained, nor could it be entirely controlled by compresses applied to the wound itself. It was not till a thick graduated compress was secured over the aorta that it was fully arrested. The effect of this hemorrhage was to produce great prostration, which required the free use of stimulants and strong beef tea during the day. At 6½ P.M., a consultation was held, and it was decided to give the patient the benefit of the only remaining resource, namely: the ligature of the common iliac near its origin. A good degree of reaction having been brought about, the operation was resorted to without further delay, as follows:

Chloroform having been administered and the compresses removed without any recurrence of hemorrhage, an incision was made about four inches in length from the upper extremity of the previous wound and carried upwards and somewhat inwards towards the median line. The integument and abdominal muscles were successively divided till the peritoneum was reached. This membrane was carefully detached with the ends of the fingers and raised from the hollow of the ilium till the neighborhood of the vessel was reached, where it was found adherent. In detaching these adhesions the peritoneum gave way and an opening was formed capable of admitting the thumb. The artery was at length reached and a ligature passed around it at about an inch from its origin. During these proceedings, one of the surgeons stood in readiness to make pressure over the aorta in case of necessity.

7th.—Patient is pretty comfortable, though he complains of considerable pain around the seat of the wound, and tenderness on pressure. Pulse 100, and pretty full. Six leeches applied around the wound, followed by a poultice; the old wound looks well, and is dressed with simple cerate and patent lint. Takes his beef tea pretty well. The recent wound looks well, and has partly healed by first intention. Limb of normal temperature. Takes one grain of opium every hour.

8th.—This morning pain and tenderness have considerably diminished. Pulse regular, 100, and moderately full. Appetite only fair.

10th.—Patient now has no pain around the wound; feels very weak. Takes a grain of sulph. quin. every four hours, and the opium is diminished in frequency.

He continued to do well until the morning of the 13th, when hemorrhage took place at the upper part of the wound to the amount of four or five ounces, which was arrested by a compress as before. Fearing hemorrhage might now make its appearance at any time, compresses were kept constantly applied.

19th.—Patient's general condition has improved very much since last note. Pulse now 80, soft and full. The ligature last applied upon the primitive iliac came away to-day. The wound looks very well, and is granulating finely. Appetite good. Rests well at night. Patient is allowed moderate stimulants.

21st.—Last night, about six o'clock, a slight hemorrhage took place, amounting to about two teaspoonfuls of blood, which ceased of itself.

22d.—This morning, about three o'clock, quite a profuse hemorrhage occurred, the patient losing about half a pint of blood; this was soon arrested by the readjustment of the compress. Patient feels very weak in consequence of the loss of blood. Pulse 108. In the evening his pulse was found to have risen very rapidly to 140 per minute. Stimulants were stopped, and in order to quiet the action of the heart, tr. veratrum viride was prescribed in doses of five drops every three or four hours, but without any good result. During the afternoon he had two or three pretty severe rigors. His pulse continued to increase in frequency until it was impossible to count it. He continued to sink during the following night, and died at six o'clock the morning of the 23d.

Post-mortem examination.—Emaciation of whole body very considerable. Peritoneal cavity was exposed in the usual way by an incision through the median line, intersected by a transverse incision through the umbilicus. A clot extended from the right iliac fossa upward between the caput coli, ascending colon and liver, and lateral parietes of abdomen and diaphragm, capable of filling a pint measure. A small clot, with three or four ounces of turbid serum, was found in the cavity of the pelvis. No lymph was observed on the surface of the intestines or the parietal peritoneum. A considerable quantity of turbid serum was found among intestines, and in the region of wound on left side. A swelling filled up the left iliac fossa, and pushed forward the superjacent parts, including the descending colon, which was closely adherent to the swelling. Over the margin of the pelvis, on the left side, an opening in the peritoneum, of the size of a copper cent, was found communicating with the cavity of the wound, which was caused during the last operation, as has been already noticed in the preceding history. This cavity was found filled with coagulated blood, which constituted the swelling occupying the fossæ iliaca, and in the midst of which were found the parts involved in the last two operations. The extravasated blood in the pelvis and elsewhere had no doubt escaped through this opening into the general peritoneal cavity. The common iliac artery was found divided across, and the ends retracted from each other. The division produced by the ligature had taken place nearly an inch from the angles formed by bifurcation of aorta.

With the object of exploring the aneurism, and the condition of the parts concerned, a dissection, exposing the entire length of the femoral artery and the external and common iliacs, was made by Dr. Agnew, to whom I am indebted for the following facts: The common iliac was found completely cut through at a point three-quarters of an inch below its origin. In the proximal portion of the vessel a small amount of partially discolored clot was found attached to the inner coat. The external iliac was opened by a sloughing wound to the extent of one-half of its circumference, about one inch below the bifurcation, at a point corresponding to that described in the operation for ligation. Half or three-quarters of an inch below this, the upper and lateral walls of the vessel were wanting, leaving an oval aperture with sloughing edges. The point of ligature of the common femoral corresponded with the description given of the operation. It was observed that the artery, from the point of ligature of the common iliac to a distance of two inches below Poupart's ligament, had fallen into a state of slough. Lying parallel with the lower portion of the external iliac and upper portion of common femoral, and partly within the sheath of the vessel, was a jagged calcific mass, resembling, in the eroded nature of its surface, a bony sequestrum, but unconnected with the pelvic edge, and evidently not of ossific character. Through this mass the superficial circumflex coursed as through a tunnel, and exhibited in its walls marked calcific degeneration. On slitting open the femoral a little below the origin of the superficial circumflex, and examining its inner surface, a sharp point of the calcific mass was exposed: suggesting the theory that it might have inflicted the wound, which led to the original hemorrhage when the first attempt was being made to pass a ligature. The femoral was then traced and found healthy to the entrance of the tunnel in the adductor at this point, where the postero-lateral wall of the vessel was entirely gone, and a false aneurism, with a capacity of at least half a pint, was found. The os femoris, which formed the external boundary of the aneurism, was denuded of periosteum to a considerable extent. The upper limit of the aneurism was nearly four inches above the opening in the artery, and the lower about three. The posterior and inner aspect of the cavity presented about two ounces of laminated clot, but in no other portion of its extent could any semblance of a true wall be found. The artery, both above and below the opening, exhibited thickening and atheromatous deposits. The popliteal vein, which was found occluded in its lower portion, and enlarged in a fusiform manner in the upper portion, on being opened, exhibited the effects of phlebitis; the occluded part was stuffed with lymph, and the distended part formed the walls of a considerable abscess. On tracing up the vein, it also opened into the false aneurism at a point corresponding to the rupture of the artery. An examination of the contiguous surface of the os femoris, revealed a very prominent and jagged linea aspera, the edge of which, to the extent of an inch, was somewhat movable. Though so much time had elapsed from the death of the subject, the care exercised in preparing the limb had sufficed to preserve its points of interest.

Art. II.—*Errors of Digestion.* By Wm. S. Bowen, M.D., of New York.

A gentleman whom I casually met at the sea-side, informed me that during the last four years he had suffered from gastralgia. Pain in the stomach was the only symptom he complained of, but there was manifest loss of flesh and strength. The pain, he said, had always been relieved by a full meal; this, however, was followed by flatulence. Remedies had proved unavailing. There was not any degree of soreness, or nausea, or vomiting, or water-brash. His appetite was unimpaired, and his bowels regular, and all the excretions were *apparently* healthy. His tongue was pale, but quite clean; pulse a little quick and frequent; countenance of an ashy hue.

I report this case as being simply illustrative of the fact, that our treatment of errors of nutrition must of necessity be empirical so long as confused ideas of digestion prevail. The current opinion is that stomach digestion is histogenetic—and this opinion is correct. Is it *as* clear that nitrogenous food is absorbed by the stomach?

This view depends upon the practical isomerism of the protein compounds, and their identity with the albumen and fibrin of the blood, and the solvent power of pepsin (?) when added to hydrochloric acid. But the question arises, how is soda, which is unquestionably, essential to the metamorphoses of albumen, combined with that body? Perhaps I may be pardoned, in view of cases like the above, for submitting the following outline of histogenetic digestion, legitimately derived from the organic chemists.

Nitrogenous food consists of the protein compounds in combination with sulphur and phosphorus, and alkaline phosphates and chlorides. Add to these substances the muriate of ammonia and muriatic acid of the gastric juice, and the reactions furnish the chlorides of potassium, calcium, and sodium—and the muriates of magnesia and ammonia—and phosphate of water—oxygen being liberated.

These salts are absorbed by the stomach, except, perhaps, the chloride of sodium, which, from its affinity for albumen, probably combines with that body, in part, at least, as it is elaborated, and precipitates it, as it were, thus enabling it to pass separately from the amylaceous and fatty matters into the intestines, there to be combined with the soda of the bile, in order to be rendered osmotic—this being, obviously, the office of that alkali in the secretion.

The albumen, thus prepared for absorption, passes into the lacteals as a protoxide of the albuminate of soda, being also in combination with sulphur and phosphorus, and such other inorganic matters as are not eliminated by the digestive process. In the lacteals, etc., and the blood-vessels, the metamorphoses of albumen are continued—fibrin and the blastema being produced by oxidation.

I have endeavored, in as few words as possible, to answer the question above propounded. The slightest reference to any recent work on physiology will enable the practitioner to fill up the outline, and thus test its accuracy. It will be seen that the views herein contained are based upon the protein theory which was demolished eleven years ago. The history of this theory is curious. Suggested by the supposed isomerism of the albuminous bodies, it failed to demonstrate their isomerism satisfactorily, or the necessity for this identity of chemical constitution in the production and assimilation of the plastic element of the blood.

Proclaiming the discovery of a radical, and giving directions for its preparation, and an account of its properties, constitution, and combinations, the ablest chemists declared that they were unable to prepare it, and that if Mulder succeeded, then this product of his laboratory stands isolated and without an analogue in the series of known organic bases. And they were right. Yet this hypothetical substance—*protein*—has lent its name to the pages of chemistry and physiology, from the great systematic works down to the fugitive article of a medical journal.

Mulder asserted that protein was the radical of the albuminous bodies, vegetable and animal. Liebig denied it, because "a body destitute of sulphur, and having the composition of protein, is not obtained by the methods given by Mulder." *

It is remarkable that Liebig failed to see the broad physiological character of the protein theory. Mulder did not claim for protein that it is a chemical base, in the strict technical sense of this term. He was as able to judge of its complex character, and the difficulties attending its analysis, as any chemist in Europe, and he waived the consideration of this point, and presented the radical named as the common foundation of all the organized tissues, which it truly is. This oversight on the part of Liebig can be accounted for on the supposition that the habit of exact and rigid analysis had trained his mind to associate definite ideas with definite terms.

The general opinion of chemists on this subject is expressed in the following quotation from the *Quarterly Journal of Chemistry :* †

"It is now generally admitted that albumen, fibrine, and casein, do not part with the whole of their sulphur when submitted to the action of potash—that, in fact, protein does not exist; and Guckelberger deduces from this fact, that sulphur is contained in these bodies in two distinct forms of combination, the one of which is decomposed with the loss of its sulphur by potash, whilst the other is not; that these substances are not simple compounds of a single group of atoms, or radical (protein) with sulphur, but are made up of several groups, which must be considered as proximate constituents of the compounds.

"Elementary analysis is not calculated to throw light upon the constitution of such complex combinations as these here under consideration, and recourse must be had to the study of the products of their decomposition, a method which has been of such signal service in promoting our knowledge of other less complex substances, as may be instanced in the cases of amygdalin, salicin, etc."

Receiving this with all respect, I would nevertheless state, that however true it may be in the abstract, it has but a remote and indirect bearing upon the question at issue, and I furthermore assert, that a desulphurizing and dephosphorizing process does occur in nature as indicated by Mulder, and that pure albumen (protein)—the peptone elaborated primarily from the protein compounds of the food—is presented in the capillary vessels as the radical of the blastema, and is, therefore, what Mulder claimed for it, a true physiological base. Admit the principles here involved, and the study of nutrition, and of pathological organic processes, becomes intelligible; deny them, and even the logical demonstration of these processes is arrested by "*the present state of science.*" We are at sea without a compass.

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* *Chemistry of Food.*

† Vol. i. p. 82.

It may be said that I have given a wider significance to protein, than Mulder intended; or, that I have assigned to it an office, and attributed to it powers not contemplated by him. Let us see.

He says:* "In both plants and animals a substance is contained, which is produced within the former, and imparted through their food to the latter. To both, its uses are numberless. It is one of the most complicated substances. It is very changeable in composition, under various circumstances, and hence, is a source of chemical transformations, especially within the animal body. It is, unquestionably, the most important of all known substances in the organic kingdom. Without it no life appears possible on our planet. Through its means, the chief phenomena of life are produced. In the animal body, this substance is the chief constituent of the blood, the muscles, and many other parts, and affords frequent opportunity for the production of new compounds.

"No impartial observer can either doubt or deny that protein preëxists in plants, and is not produced by the weak alkaline solution used to prepare it. For, first, the protein compounds within the plant have precisely the same properties as protein itself, provided we exclude those properties which belong to the substances combined with the protein. Vegetable albumen, for example, which is a compound of protein, sulphur, and phosphorus, has all the properties of protein, modified slightly by those which belong to sulphur and phosphorus. If we consider further, that protein and albumen have the same composition in the hundred parts, abstracting the sulphur and phosphorus which the latter contains, we think there can be no doubt that protein does preëxist in plants.

"It has been proved that the chief constituent of the animal body is prepared by plants; that animal fibrin, albumen, and casein differ from each other only by the small proportions of sulphur and phosphorus which they contain, and that they yield the same protein as vegetable albumen does when treated with alkalies. Liebig has since discovered a similar identity between vegetable albumen, coagulated albumen, legumin, and glutin, in so far as their relative proportions of carbon, hydrogen, and nitrogen are concerned. The analyses he has published, have thus more fully confirmed the conclusion, that all these substances are protein compounds.

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* *Chemistry of Vegetable and Animal Physiology.*

"It is certain, however, that they contain protein compounds, which, when introduced into the animal body, transfer the protein to it unchanged. Hence, we may infer, that the changes produced by animal digestion in these substances, in order to prepare animal constituents from them, are, *first*, that it dissolves the insoluble vegetable albumen and glutin; and, *secondly*, that it alters the quantity of sulphur and phosphorus, which probably exist in the vegetable protein compounds in other proportions than in those of the animal. With regard to glutin, this fact is proved."

(Lehman, however, remarks, in connection with this point,* that the quantity of sulphur in the peptones he found to be constantly the same as in the substances from which they were derived.)

It will be seen that I have not modified Mulder's theory further than to call his protein albumen. Let us now examine the grounds of Liebig's opposition.†

"The chemist (Mulder) who first entered on the field of research, which promised so abundant a harvest, assumed, on the strength of the most defective experiments, that in these three substances (albumen, fibrin and casein), the four above-named elements (carbon, hydrogen, nitrogen and oxygen) were combined exactly in the same way in all, to form a group, which group constituted a distinct substance, capable of being isolated, to which the name of *protein* was given. Assuming the chemical constitution of this group as the same in all three bodies, what was now the origin of so great a difference in properties as they presented? The cause of this difference was sought for in a fifth element or in a second group.

"It was found, namely, that all these animal substances contain a certain amount of *sulphur;* it was assumed, that some of them contained also a certain amount of *phosphorus;* and the variation in their properties was ascribed to the presence of this sulphur, or sulphur and phophorus (the existence of phosphorus, as an essential element of these substances, has not, however, been in any way established). In this way, an organic radical, or a body analogous to organic radicals, was created; a body formed by the combination of twelve hundred elementary atoms, a group of twelve hundred atoms, the physical character of which was determined by the addition of one or more atoms of sulphur and phosphorus. To support this view, a property was imagined, which a compound of sulphur could not possibly exhibit. The sulphur, which in these compounds caused such striking differences, was as loosely combined with the protein as we find it in a mixture of iron filings or sawdust with sulphur. It was supposed, that when these substances were acted on by an alkali, the sulphur was detached from the protein, just as easily as if it had not been combined with it; it dissolved in the form of sulphide of potassium and hyposulphite of potash; the protein was thus set free, and dissolved also in the excess of alkali; and when this alkaline liquid was neutralized by an acid, the fundamental constituent of these animal substances, the protein, was obtained in the form of a gelatinous precipitate. The idea of the sulphide, or of the sulpho-phosphide of protein, led at once to a series of oxides of protein, to a multitude of imaginary substances, to which was now ascribed, as of old to phlogiston in chemical processes, the function of determining and effecting all the changes which occur in the vital process.

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* *Physiological Chemistry.*

† *Chemistry of Food.*

“ Let us now see to what truths this supposition has led, and how it explains the differences in the properties of the animal substances. In the latest work of Mulder, the constitution of the protein compounds is represented as follows:

		Eq.		Eq.			Eq.	
Crystalline humor	contains for	15	protein	1	sulphur.			
Casein	“	10	“	1	“			
Vegetable gelatine	“	10	“	2	“			
Albumen of eggs	“	10	“	1	“	and	1	phosphorus.
Fibrin	“	10	“	1	“	“	1	“
Albumen of blood	“	10	“	2	“	“	1	“

“ We have now reached the ultimate object of this theory; and the question. What insight has it afforded? is answered by a glance at the above table.”

Will the reader look at it?

The first four bodies represent the protein compounds forming nitrogenous food. These substances, subjected to the action of the gastric juice, and converted into albumen, or albumen peptone containing the whole, or a part of the sulphur and phosphorus, yield to the circulation albumen of the blood ($10\overline{\mathrm{Pr}}\ 2\mathrm{S}\ 1\mathrm{P}$), which, by oxidation, yields fibrin ($10\overline{\mathrm{Pr}}\ 1\mathrm{S}\ 1\mathrm{P}$), and this, by a further oxidation, gives the radical of the blastema, the ter-oxide of protein ($10\overline{\mathrm{Pr}}\ 1\mathrm{P}$). It appears to me that the glance is satisfactory.

But the chemists are not all united in the opinion that sulphur cannot be separated from protein. Sir Robert Kane remarks: * "Protein I consider, not with Mulder as the basis of our tissues, but as the simplest product of their decomposition." "Although it is difficult to judge among the conflicting statements on this subject, I do believe that by treatment with reagents all sulphur and phosphorus may be removed, and an organic product will remain, which may be called protein if it is so wished."

"Such," says Liebig, concluding his crusade against protein, "is the progress which animal chemistry has made in eleven years in regard to the chemical constitution of the blood-constituents. We know as much of it now as we did forty years since, not to mention that the assumption of the presence of phosphorus in albumen and fibrin, an assumption resting on the most frivolous experiments, renders the explanation of the transformation of the casein of milk into blood utterly impossible." †

Eleven years have passed since the rejection of Mulder's theory. Is physiology the better for its repudiation? Has not this science advanced in the proportion that Mulder's views have been adopted (while nominally rejecting them) either directly, or as the basis of new discoveries? I leave these questions to be answered by the common sense and honesty of the profession that is the most interested in the advance of physiology.

The protein theory is an old affair—more than twenty years have passed since it was announced. In a recent review of an equally ancient work ‡ (Todd and Bowman's "Physiological

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* *Elements of Chemistry.* Second Ed.

† "In the blood of animals belonging to different classes, in respect to their food, we observe a variation in two ingredients, namely, phosphoric acid and carbonic acid; but this difference in composition is without any influence on the properties of the blood, which retains its alkaline character. In the blood of the herbivora we find the alkali in part combined with carbonic acid; in that of the carnivora we find this carbonic acid represented and replaced by phosphoric acid, without any alteration of the character or of the functions of the blood. This is again one of the numberless facts which fill with inexpressible admiration the soul of the observer of natural arrangements, namely, that an alkaline phosphate is identical in its properties with an alkaline carbonate. Contrary to all known laws, it appears to the chemist like a miracle, that two acids, a gaseous one and a fixed one, one of the weakest and one of the strongest, which of all acids differ most in composition, can form, with the alkalies found in the blood, compounds of the same chemical character. Phosphate of soda has an alkaline taste and reaction, like the carbonate; and its solution in presence of free carbonic acid, takes up as much of that acid as the carbonate of soda does, and like it, only more easily, gives it off by agitation with air, in vacuo, or by evaporation, without losing its power of again absorbing the carbonic acid."—*Familiar Letters on Chemistry.* Third Ed.

‡ Brit. and For. *Medico-Chirurgical Review,* No. 41.

Anatomy"), we read the following paragraph: "We would cite as illustrations of the changes which fourteen years have made, the general abandonment of the notion that the fibrin of the the blood forms the basis of the muscles; and the converse idea entertained by many physiologists and pathologists (to which, however, we are not ourselves yet converted) is a hopeful sign that this substance is in a state of retrogressive, not of progressive, metamorphosis."

It ought to be a matter of regret to any man that he is ever betrayed into the verbal expression of enthusiasm, although this weakness is common enough, and even has its admirers; but what excuse can be offered for that placid form of the error which, deriving its origin from the inkstand, is, like written profanity, characteristic of folly prepense? Yet, looking back to the time of Richerand's Physiology, one may be pardoned for recording his admiration of the genius that has revealed the secret processes of organic nature—and this praise, I conceive, is due from the medical profession to Professor Mulder.

Art. III.—*On the Anatomy and Diseases of the Prostate Gland.* Remarks of Valentine Mott, M.D., before the New York Academy of Medicine, Sept. 1 and Sept. 9, 1858. Reported by George F. Shrady, M.D., Assistant-Surgeon to the New York Hospital.

Dr. Mott, after expressing his regret that he was not able to be present at the last meeting, stated that he did not know at what point the discussion was left, but he would offer a few desultory remarks on the relative anatomy of the prostate, and reserve a very interesting part—its diseases—for a future meeting. He continued:

If the Academy will indulge me, I will offer a few remarks upon a very interesting part of the subject of the prostate gland, viz., its surgical anatomy. This organ is a small portion of our frail fabric, which has not received a great deal of attention in relation to operations performed upon and about it. I cannot suppose that the pure physician will take much interest in these few remarks; but they are interesting to myself, and they may be to a certain degree gratifying to those who are more particularly interested in surgery.

Note.—By recommendation of the Section on Anatomy, etc., the subject of the *Anatomy, Physiology and Pathology of the Prostate Gland* was brought up in the Academy of Medicine for discussion at the regular meeting in August. By appointment of this Section, Dr. Van Buren opened the discussion with an elaborate and highly interesting review of our present knowledge of the anatomy and physiology of the prostate. At the next meeting, Dr. Mott continued the discussion with the interesting remarks which we have the pleasure of presenting to our readers.

This gland is situated equi-distant from the basin of the ischia above the membranous part of the urethra, and upon the rectum where there is no interposition of peritoneum by the lower part of the bladder—called the Bas-fond. This prostate gland is supplied ordinarily with a fair amount of vessels. There are some circumstances, in relation to surgical matters, connected with this gland, that are exceedingly important to be recollected by every man who cuts it or about it. Small vessels, that supply it as a normal part, are very unimportant. Let us look at the vessels of these parts—let us take up the veins.

The veins are very remarkable—remarkable in their number, and as to their size, are wonderfully large. These veins are principally interesting in connection with the affections that occur in and about the prostate, as we shall see hereafter. These veins, when cut, even in the middle period of life, will emit an enormous quantity of blood; to such an extent has blood flowed from these parts after the lateral operation for stone, that I myself have been very much alarmed at its quantity, and have very much feared the consequences. In the course of my experience, which passes over more than half a century, I have met with few cases, aside from operations about these parts, that have astonished me with the quantity of blood that was lost. It seems to be very unimportant until, perhaps, a week after the operation. I have been advertised of the condition of patients at this period after the operation, and have found them almost pulseless from the loss of an enormous quantity of venous blood. There is arterial hemorrhage generally at the commencement of the operation; the amount of blood lost, however, is trifling when compared with the venous hemorrhage. The quantity of blood thus lost has almost placed the patient in articulo mortis, and I have been compelled to plug up the opening with a sponge, taking the chance of the accumulation of blood in the bladder.

Now, the veins that are about the neck of the bladder run in such a way that they are always cut by the operation I shall presently describe.

These veins are accumulated in great numbers, and under certain circumstances are in a varicose condition. This condition is not confined to the later period of life, when we find certain diseases of the prostate occurring, and those affections which are more generally known as diseases of the prostate, but in early life this condition of things is frequently noticed. This collection of veins is so large and so numerous, that they go by the name, venæ pampiniformæ. These veins run immediately over the proper capsule of the prostate gland, and they are the cause, no doubt, of the very serious hemorrhages that take place late in life, and open upon the free surface of the bladder, where there is no disease of the prostate, no tumors of the bladder, nothing to account for the hemorrhage other than this distribution.

Ordinarily, in operations in this region, there are no vessels of considerable size involved, except these veins; but there is an artery that is occasionally met with, which runs between the proper capsule of the gland and the ilio-vesical reflection. These arteries are of considerable size, coming, as they do sometimes, from the internal iliac instead of the internal pudic; they go to the bulb, to the crus and dorsum of the penis of that side. These vessels have been described by Haller, Burns, Barclay, and also by one of the Munroes. Whenever a profuse hemorrhage occurs from an operation about the prostate gland, in which that gland is cut, and the internal pudic artery is not wounded, then it is gratifying to know that an artery of that description runs in that direction, and that when it is cut, it can be arrested by nothing but the sponge.

The surgical anatomy of this gland is exceedingly interesting to every surgeon. Its anatomy in relation to operations has not been understood well for a great many years. It has been developed quietly, and now perhaps we understand it fully.

The prostate is described as consisting of two lobes, and perhaps we are not all prepared to learn that these lobes are very ill defined after the adult period; but we know the fact, that before the fourth or fifth month, it consists of two distinct lobes, separated by an isthmus, which becomes the third lobe.

This gland has its proper capsule; it is a secreting gland, but whether it be a conglomerate or follicular gland, some are of one opinion and some of another. It is now generally believed by those who have prosecuted microscopical observations, that it is composed of a series of follicles. This question is still an object of a good deal of discussion.

This gland surrounds the urethra. I have not been of the opinion that such was the case until lately. I had supposed that this gland was composed of two lobes, that the sulcus in it about the veru montanum was in the two lobes, and that there was no gland above. The observations of Amussat, who is familiar to most of you, settled the question fully that the prostate is entire about the urethra, that it runs over the anterior part, and therefore surrounds it. We are indebted more to microscopical observations for this information than to anything else.

Besides this capsule there is another, the fascia iliaca, which was known before many others. This fascia covers the iliac muscles, goes over the pelvis under the great vessels, then down to the side of the bladder, but before arriving there it is attached to the side of the bladder, where it forms a perfect septum between the perineum and cavity of the pelvis. This is a most important fact to be recollected, not only in regard to its situation, but in relation to the operation for lithotomy.

This ilio-vesical fascia that goes from the side of the pelvis, passes to the side of the bladder, and when we are erect the angle is more considerably above the plane of the horizon than when we lie down. The difference is perhaps equal to ten or fifteen degrees. From the side of the pelvis to the bladder it is covered by the levator ani muscle. When we get down to the side of the bladder, just above its neck, there is a close layer of this fascia which goes over the prostate, enveloping it next to its proper capsule. So far its anatomy is well understood.

In any case of operation upon the pelvis, take any subpubic operation, with one exception—the recto-vesical—any operation involves essentially and materially the direction of this fascia. The success of these operations depends *cæteris paribus*, upon maintaining the entirety of this septum, thus guarding against urinary infiltration.

A great danger in lithotomy is cutting this membrane. I maintain that operations for lithotomy ought always to be performed with reference to the course of this septum, otherwise the patient's life is greatly in danger.

There is nothing that has glorified modern surgery more than the study of relative anatomy. It has dignified operative surgery as a science, and the man who does not cultivate this relative relation operates in the dark. It is not in the power of any man to do otherwise, unless he be different from those who have lived within the last half century. He ought to be able to say how this or that runs relatively to that or this, or that or the other point. He is unable to do it unless he cultivates a knowledge of this relative anatomy.

If you will permit me, I will state a fact in this connection: Some thirty to thirty-four years ago, one of my old colleagues, who has paid the debt of nature a number of years since, was in the habit of speaking rather jocosely in regard to relative anatomy. He would often say in relation to many parts of the body, "That is your relative anatomy." I had a case of a young lady, who came to this city from Massachusetts, with the most tormenting, distressing attacks of traumatic neuralgia that I ever saw, from a punctured wound in the sole of the foot. Everything had been tried to relieve her; it had been scarified, and I believe the actual cautery was applied. The pain was so intolerable that she had no power over her foot. I saw the case, and seeing that it was an important one, I sought his advice. I proposed, allow me to say, that a part of the post tibial nerve be exsected. I asked, a little mischievously, How does this nerve run relative to the artery and accompanying veins? It runs behind the malleolus internus. But how relatively to this tendo achilles, and these vessels? He had taught anatomy for forty years, but surgical anatomy was not then in fashion. It run somewhere I knew—but that did not satisfy my boyish pride. I thought it important to know its exact situation; I thought that the beauty of the operation was to know exactly where to cut. Your humble servant ventured to learn it as a new matter. I went to the cadaver. I satisfied myself where it was, then I said, we will go relatively upon the nerve itself, and I laid it instantly bare.

This knowledge is beautifully illustrated in the anatomy of the groin. The relations of the epigastric are very important, running on the inside of internal ring, and on the outside of external abdominal ring.

It is not every one that teaches who points out the relations of these points. Relative anatomy is of the utmost importance; let the surgeon operate where he will, to be successful he must first familiarize himself with the relation of the parts to be operated upon. I make the assertion, that all sub-pubic operations, with the exception of the recto-vesical, involve a knowledge of the relation of this fascia. which I have named, in order that the cavity of the pelvis be not opened. If these operations are to be more successful, it is because we understand our relative anatomy.

Lithotomy.—The common operation for lithotomy which is most in fashion, is the lateral, known from the time of old Frère Jacques. This operation divides the side of the prostate only; it goes parallel with it, and not above it, and does not open into the cavity of the pelvis. A man who would perform the operation with this reference, will be most successful.

I say, and I have said for a great many years, that all operations for the purpose of opening the neck of the bladder and cutting the prostate a little below this ilio-vesical fascia, are better done with some sort of a knife than with any other instrument whatever. I have no wish to be arrogant in this matter. I have performed a great many more operations for stone than will be performed for many years. The number amounts to over 160, and I have never used in the operation anything but a knife and bistoury. On the whole, I prefer a straight bistoury. I was occasionally in the habit of using Mr. Thomas Blizard's knife. Of the gorgets that were introduced by Cline and Physic, I consider the one introduced by Physic as the best.

Cline's is a dangerous instrument. I have seen him use it. Physic's is a dangerous one unless a man understands this relative anatomy; this was not in fashion in his day.

The knife goes through one side of the prostate; it passes below the loose layer of the fascia iliaca. I will also add, and this is contrary to the opinion entertained by many gentlemen, that I cut through the whole prostate. I never wish to tear it. If you are below this fascia you may cut to the ramus of the ischium without any danger.

Those who are not familiar with the use of the gorget, depress the hands, elevate the blades, and consequently it passes too high up, and occasions the danger alluded to. Dupuytren gave the subject great attention before he and his colleagues discovered the best plan. One took the recto-vesical, and the other the high operation.* All instruments that do not pass below this fascia are dangerous. I never cut the internal pudic artery with the knife, because I cut downwards and outwards in such a manner as not to interfere with it.

I am of the opinion that the operation for stone is most easily performed in the manner alluded to. Some cut through eleven-twelfths of the gland, and tear the rest; but remember that lacerated wounds are difficult to heal, and you had better make a clean cut. The idea has been entertained that by cutting entirely through the gland you cut this fascia, but having an eye to the course of it, there is no danger.

The bi-lateral operation is entirely free from the danger of wounding the artery; but I must say that I never saw the elder Cline, the preceptor of Sir A. Cooper, operate for stone that he did not cut that artery. I have seen the hemorrhage so profuse that the blood would run off the table in a stream and saturate the bed. I choose to avoid such consequences. These points about the prostate gland are eminently useful to us, and are of the utmost importance.

In regard to opening the bladder in different ways for evacuating urine, there is no danger except in the perineal cut. The operation *per rectum* is one unattended with danger, not involving the fascia; it is therefore to be resorted to when the bladder is to be emptied. One thing I will say, that during a long life—the many years I have practised surgery—it is gratifying for me in the retrospect, to recall this fact,—*that I have never punctured a human bladder*, though I have seen difficulties presenting themselves of the most serious character. I am always horrified when I hear that a surgeon has punctured the bladder. I have never seen a case of stricture that could not be relieved by the judicious application of instruments. In that disease confined to old people, I have never failed in being able to introduce a catheter, and where others have repeatedly failed, I have resorted to the long Sabatier's catheter, and have never failed in getting into the bladder.

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* Dupuytren took the bi-lateral.

The mode of introducing these instruments into the bladder, with a few remarks on the prostate, I will reserve for a future occasion.

SPECIAL MEETING, SEPT. 9, 1858.

MR. PRESIDENT: There is a remark or two that I will subjoin to those which I made at our last regular meeting in relation to the coverings of the prostate. Besides the proper covering, this gland has another covering or capsule, which is the ilio-vesical reflection of the fascia iliaca, as it comes from the side of the pelvis, and goes to the side of the neck of the bladder. We have also in this situation the levator ani muscle, covering both portions of the fascia iliaca. In order to demonstrate this muscle fully, it is necessary that we should make a careful dissection by detaching it from where it covers the ilio-vesical fascia close to the pelvis, turn it down from this, and from off the prostatic portion. If we raise it in that way, we shall come to the median line of the prostate, and will there see that the muscle from the other side unites with the one which we were dissecting at the mesial line.

The prostatic portion of the levator, as well as where it slings the membranous portion of the urethra, must be cut in the lateral operation for stone in the bladder.

This muscle, therefore, covers not only the ilio-vesical reflection of the fascia iliaca, but the prostate also, so that at this point the muscles coalesce completely. The sinus pocularis or utriculus prostaticus, situated a little in advance of the veru montanum, has been considered by Weber as a rudimentary uterus, a homologue of that important organ; probably because Morgagni found, in two instances, that the vesiculæ seminales terminated in it.

In a surgical point of view, this little cup ought to be recollected, as a catheter or bougie will be caught in it. This can always be remedied by an experienced surgeon, by withdrawing the instrument a little, and tilting it up before passing it into the bladder.

The veins about the neck of the bladder, especially in persons advanced in life, will have in them what are denominated by pathologists, *phlebolites.* I have a specimen in my museum which beautifully illustrates this fact. Some of these veins are almost always cut. They are not always in a varicose state; but, whenever they are in this varicose condition, there will be frequently a great deal of hemorrhage when an operation is performed about these parts. These do not bleed during or immediately after the operation; but in the course of five or six days, or a week after the operation, I have known the most profuse hemorrhages to occur—hemorrhages that were truly alarming, so much so that I have been compelled to plug up the wound with a sponge and ice, leaving a catheter in the bladder for the escape of the urine. I have come very near losing my patients a week after the operation from these terrific hemorrhages. I know them to be venous, because they have the character of venous blood. This hemorrhage seems to be confined to operations that are performed after the age of fifty years. In my experience, I have operated after the age of seventy, and I have not found these veins so troublesome in the advanced stage of life, as in middle life.

The uni-lateral, or bi-lateral operation does not avoid cutting these veins; the only way is cutting above the pubis. Very few persons in this country do this.

I will endeavor now, Mr. President, to abridge my remarks upon the very interesting subject that is to follow, viz.: the *Diseases of the Prostate Gland.*

The morbid anatomy of the prostate gland is exceedingly interesting, because it involves so many terrible and afflicting affections, and, as such, it is deserving of the closest attention on the part of the surgeon.

It is a very singular fact, one that deserves to be mentioned, although we read about it, and pass it over without thinking of it as it deserves, that this body will frequently enlarge, when other parts of the body are diminishing and shrivelling in the decline of age. This is, indeed, a formidable disease, which, in too many cases, is out of our power to relieve. The pathology of this gland becomes peculiarly interesting, because it ought to have associated with it other diseases besides mere enlargement. This is considered, by gentlemen of the profession who do not read much, to be the only disease of the prostate. There are affections of it that are very formidable besides the mere hypertrophy.

But first I will call the attention of the Academy, for a few moments, to what is termed *atrophy* of this gland.

This gland, then, has been found diminished in its natural size. The proper capsule has been found to be filled with an aqueous fluid. The gland, then, can be atrophied, as well as hypertrophied. This gland has been described in this state by several pathologists, and by two particularly, Sir B. Brodie and Mr. Cooper, who found it as I have stated. This disease is not necessarily confined to old age, neither to youth; it seems to follow no stated law, but occurs at almost any period.

Inflammation of this gland occurs more frequently than, perhaps, many of us are aware. I am perfectly well satisfied, that inflammation of this gland is of very frequent occurrence—whether it be the secretory portion, whether it be the filamentous or areolar tissue of the gland, I shall not stop here to discuss. My impression is that it is an inflammation of the entire tissue of the gland.

The prominent symptom is, remarkable tenderness on introducing the finger into the rectum. When this extreme sensitiveness exists, with difficulty of passing water, it is evidence to my mind that the gland is very much inflamed.

We know perfectly well, also, that suppuration occurs in this gland, and produces a great deal of mischief. Lallemand, among others of distinction, states that the whole gland is inflamed. And he goes so far as to state that the openings of the gland into the urethra pour out the pus. This shows, conclusively, that the gland is inflamed. Sir Benjamin Brodie cites a case in which more than a pint of pus was discharged, from time to time, from the urethra.

This inflammation may be caused by the violent use of instruments. I say violent; this is too frequently the case. There never was a better axiom in surgery, "Make haste slowly," particularly in introducing instruments into the bladder. The violent use of these instruments, intense sexual indulgence, as well as urethritis, are capable, then, of producing deep suppuration in the gland itself. I have a specimen in my museum in which there is an abcess in one lobe, which caused retention of urine, in which the practitioner was unable to pass an instrument, and making use of violence instead of knowledge, forced the catheter through the membranous portion of the urethra, a little above the apex of the prostate, and into the side of the neck of the bladder. The retention was relieved, but the inflammation that followed was fatal.

In suppuration in this gland, the pus generally takes the route into the urethra. Hence, Lallemand states that he has seen the openings from the prostate large enough to admit the end of a catheter, from which openings pus escaped into the urethra. The matter will sometimes make its way through the rectum, sometimes into the perineum, instances of which I have seen. I have also seen an opening through the urethra just at the apex of the prostate. In one case I found an opening into both rectum and perineum. Both fistulæ were opened to the apex of the prostate. The cure was complete. A catheter was constantly used.

I now remember seeing two very forminable cases, about a year since, of this sort, which are not yet entirely cured. Upon both these I operated with a view to close the recto-urethral opening. In one instance, there was an opening into the perineum and urethra of some years standing. I laid open the urethra from the fistula that was in the perineum, completely into the rectum and a little above this fistula that entered the rectum; the urethra was so sound, and he was so desirous of not being annoyed by the catheter, that I indulged him. I thought he might get along, as the uretha was so perfectly good that a few drops of urine only occasionally came down from the rectum. Upon close examination there was found an opening into the rectum which has not yet entirely healed. He has now returned from the South, and, in a few days, will put himself under my care again. During the winter he has been cauterized, but with no good result. He has a full knowledge of his case, and is willing to risk another trial.

I recall another instance, with which I know a gentleman before me is also acquainted. The case to which I refer is a medical man.

He has no disease of the prostate. There is an opening into the urethra, and also into the rectum. We attempted an operation, and it failed. I laid open the fistula upwards and downwards, above the apex of the prostate, and so down into the membranous portion of the urethra, hoping that it might close. He was unwilling to wear a catheter.

The doctor was, as all doctors are, exceedingly restless and irritable. He thought he could get along by care and attention; but, unfortunately, it has not healed. His greatest suffering arises from the passage of some of the fæces by the urethra.

These remarks are not extraneous to the subject, inasmuch as they are all connected with suppuration of the prostate gland. Since we had this gentleman under care, he has been subjected to the division of all the fistulous openings, and an attempt was made to effect union by means of the silver wire suture, but it failed. He is now in a melancholy state, being constantly annoyed by fæces passing into the urethra and mixing with the urine, causing him to be an object of disgust to himself. These, then, are instances of the effects of suppuration about the prostate.

In one instance that is fresh before me, I fortunately relieved a gentleman who was of some consideration, by opening the abscess that was directly between the rectum and prostate gland, so that he was no longer annoyed by difficulty of micturition. When I first saw him, no instrument could be introduced. I took my prostatic catheter, which is two inches over the common length (the noble idea of the immortal Sabatier), and it passed without the least difficulty, and drew off the urine. Evacuating the bladder of water, I then examined per rectum, and found a large fluctuating tumor directly over the prostate and the membranous portion of the urethra. I felt the tumor very distinctly in that situation, and by separating the anus sufficiently, I was enabled to look in and see the bulging that was caused by the presence of this fluctuating mass. I introduced a bistoury, when a large quantity of pus escaped, and he had no more trouble. The inflammation of the prostate may be followed by the deposit of a large quantity of matter. Brodie says, that as much as a pint was discharged from a case that he saw; not, however, at one time.

The prostate is not generally the seat of *ulceration*. This is a process in it that is not common. It has occurred from the introduction of instruments into the urethra, which has first caused inflammation, the accumulation of pus, then pressure upon the gland, and ulceration. This ulcerative process follows. Excessive onanism and intense sexual indulgence will give rise to this inflammation.

I have known this to follow such indulgence where death has been the result of the suppuration that has thus been induced. Intense sexual indulgence, then, will produce this form of difficulty. This is attended with a great deal of pain and tenderness in the perineum, a fact which is denoted strikingly by the introduction of the finger *intra rectum*.

These abscesses in and about the prostate, will open, not only into the urethra, as probably was the case in the patient whom Brodie describes where a pint of matter was, from time to time, discharged, but they will open into the rectum, as in the two instances of gentlemen, both of whom were patients of mine.

Tubercles are occasionally met with in the prostate. These tubercles go on from softening to progressive ulceration. We have an instance recorded by Lallemand, where thirty of these abscesses were found, and as many tubercles. It must have been considerably hypertrophied. Therefore the prostate gland is liable to have the same condition of things existing as we find in the testis, mesenteric glands, vesiculæ seminales, or where it is most frequently met, and where you are all acquainted with its existence, in the lungs.

Dr. Gross, well known to the gentlemen present, if not personally, by reputation, related a case where tubercles existed in this gland. He states that they follow the law of tubercles in other parts of the body.

Again, the prostate is said by some to be affected with *Cancer*. If we adopt the language of Mr. Walsh, that all forms of diseases that are heterologous are cancerous, we may consequently have it in the prostate gland. I prefer the old arrangement of cancer and malignant disease—or what does very well, hard and soft cancer. I am very well aware that they both have the microscopic characters of cancer.

These malignant forms of disease occur within and about the prostate. The body of the prostate is not so apt to be involved as in other forms of hypertrophy. There are three instances on record, one by Sir Astley Cooper, another by Mr. Stanley of London, and another by Langstaff. These three instances of malignant disease connected with the gland were in children. Therefore, malignant and serious disease of the prostate is not necessarily confined to old people.

In Stanley's case there was a tumor about the size of an orange connected with the third lobe; this tumor was soft, and was the product of a malignant formation. One of these cases was in a child 8 or 9 years of age, and the other two were during early boyhood. The great Dr. Fothergill of London died of malignant disease of the prostate. Great he was in every sense of the word. His name is known to most of those who read, but he is better known to some of us who have known his pupils and friends. Such was the character of the disease that as it grew upon him, it completely closed up the urethra, and his water had to be drawn off. He was one of the most remarkable men that ever lived, not only as a sound and noble physician, but one of the most extraordinarily virtuous men that we have any record of. He was attended by his friend and contemporary the illustrious Percival Pott—who would joke with him in relation to his bachelor life. On one occasion he said to him: "Well, sir, considering you have always lived in London you have a remarkably good urethra." "Percival," said he, calling him by his first name, "this instrument," referring to his penis, "has never been used for any other purpose than to draw off my water."

I had a case, a few miles from the city, some years ago, which was evidently a fungous growth about the prostate. It was, as in Dr. Fothergill's case, of a malignant form or soft cancer. I choose to give it that phraseology. Whenever an instrument was passed, it would plainly enter the fungous mass, which would bleed freely. He ultimately died.

I have seen another instance where the tumor was not of the prostate, but a polypous growth, which acted as a valve, and gave rise to the most marked symptoms of stone in the bladder. This ought to teach us that nothing but a sound, grating against another hard substance, should justify the operation for stone in the bladder.

Under the head of Cancer, I will mention a case that I had in conjunction with my friend Dr. O'Reilly, who is probably not known to most of you, but who is an excellent Irish surgeon. In this case, I thought that there could be no doubt of the existence of this disease. The patient died, but no post mortem examination could be had to verify the diagnosis.

Senile Hypertrophy.—Most persons who have read a little are led to believe that this is the only difficulty of the prostate gland. This is the last affection that I shall name. The occurrence of this affection in old age is afflicting in the extreme, inducing a melancholy existence, and embittering the last hours of life with agony almost insupportable. I do not mean to say anything of its pathology, but simply speak of it as an enlargement of the gland. It is curious that it should occur in advanced life and be confined to the gland itself. A dissolute life is not necessary to produce it. We may instance the case of Dr. Fothergill. A bishop, a pleasant old Catholic gentleman had this affection. I told him, I thought, considering he had lived in Rome for 33 years, he had a remarkably good urethra.

There are different phases to this enlargement. The most tormenting part of this enlargement is the third lobe of Sir Everard Home—the pathological lobe of Velpeau. Before the time of Amussat, the surgeons were in the habit of speaking of the gland as being divided into two lobes.

Most of the cases occur in advanced life, and hence the name senile. It is remarkably hard in its texture. Brodie speaks of it as having a stony hardness; Rokitansky, as a fibrous enlargement; others denominate it cystic hypertrophy, on account of the cysts found in it. Travers speaks of it as of scirrhous hardness.

This enlargement comes on very gradually, and is not accompanied at first with a great deal of pain. The first symptom is difficulty in evacuating the last drops of water that are in the bas-fond of the bladder. Change of position has to be frequently resorted to. All persons with this difficulty make water better standing up. Some are obliged to get down on their elbows, so as to give the bladder a better opportunity to force the urine over the third lobe.

The treatment of this affection, as it respects remedial means, puts us at defiance. With all our resources we can make very little impression upon the prostate affected by senile hypertrophy.

If you will allow me, I will state some few facts connected with the difficulty of passing water, and the treatment, more particularly.

It is of great importance, in a difficulty of this kind, that a person should not have his bladder over-distended. I knew a gentleman, a merchant, who carried a catheter in his side pocket for the purpose of relieving himself. Everything that removes irritation is of the greatest importance, therefore it is often requisite to relieve the bladder by means of the catheter.

I know of no treatment other than palliative. We had some reason to hope, when iodine was discovered, that this great alterative would be productive of a vast amount of good; but this disease seems to baffle everything.

I have seen more good derived from a seton in perineo, at the same time keeping the bladder empty and the bowels soluble, than anything else. In that way, the poor subjects of this malady linger on a little longer.

Can this third lobe, the pathological lobe of Velpeau, upon which nothing can seemingly act with any benefit—can this lobe, I say, be removed? This is a great question to ask, and a very difficult one to answer. I have some instruments here, which, with your permission, Mr. President, I will show the Academy. They are calculated to get hold of this third lobe and remove it—that is, if the difficulty be in that third lobe. The main difficulty is in this lobe, which has been the isthmus that has been formed to constitute the gland one entire mass after fœtal life.

Lastly, and not I hope to be tedious, let me call your attention to another matter, which I have left purposely to the last, from the fact that it is a very puzzling thing. It is very analogous in appearance to what old Father Pelletan called "Engorgement chronique de la membrane du larynx"—a most admirable simile. I mean the *uvula vesicæ* of some—the *luette vesicale* of others. Dr. Baillie first described it as a membranous fold, in the form of a bar across the vesical orifice of the urethra, and has given a plate of it in his morbid anatomy. Guthrie revived our knowledge of it among the English surgeons. Some give him the credit of originality. Mercier calls it the urethro-vesical valve. Amussat denominates it valvula pylorica. Le Roy d'Etiolle styles these folds bourrelets.

Immediately at the neck of the bladder there will be an enlargement of the mucous membrane, sometimes from above downwards, but more generally laterally. This gives rise to a good deal of difficulty in passing the urine. The catheter passes readily sometimes. It is very difficult to form a diagnosis between it and enlarged prostate. In the uvula vesicæ, the catheter passes very readily. In prostatic enlargement there is frequently great difficulty.

This state of things exists sometimes without any hypertrophy of the gland, in which case the catheter will pass in more easily. Any instrument passed into the bladder will generally be followed by a small discharge of blood, which alarms the patient, who thinks it arises from want of skill on the part of the operator, whereas it is desirable and beneficial. In the opinion of Guthrie, this is a curable affection. Le Roy d'Etiolle has great confidence in scarifications. I have seen him make them. These, with the application of caustic, constitute the principal means of treatment.

I have endeavored, Mr. President, to sum this up in as small a space as possible; as it is, I give it as a mere epitome—a mere résumé of my knowledge concerning that interesting subject—*the Pathology of the Prostate Gland.*

Art. IV.—*Obstetrical and Medical Cases.* By George T. Elliot, Jr., M.D., Physician to Bellevue Hospital, the Nursery and Child's Hospital, and the Lying-in Asylum.

Case 1.—*Peritonitis with perforation of the appendix vermiformis in a boy.* This lad was eleven years of age, active, manly, and very intelligent, though small for his years, having no predisposition to disease.

April 9th, 1858.—Apparently not very bright this morning, and in play with a comrade, received a blow on the abdomen which left him breathless for a short time, after which the effects passed off.

Vomited his dinner, and then complained of severe pain in the abdomen, paroxysmal and colicky in character, for which many domestic remedies were used. During the night it increased and was aggravated by pressure. Some castor oil given by his mother.

10th.—I saw him in the afternoon, and found his abdomen tender to the touch; respiration hurried; expression anxious; pain, although constant, yet aggravated in paroxysms, and on the increase, but not localized. The oil had just operated three times, the last two consecutively. He had been unable to strain at all and desired to be carried back to bed, a striking symptom for a boy so remarkably self-reliant.

Peritonitis diagnosticated; fomentations under oiled silk, and a drachm of paregoric.

4 P.M.—Sufferings very great, writhing in bed as much as possible without moving his abdomen, and seeking relief in careful change of position. Knees drawn up. Respiration thoracic. Pulse 130. He fancied that if he could press his stomach on a pillow, some relief would follow, but cautioned his nurse to move him very carefully. The position was, however, unendurable an instant. No especial localized site of abdominal tenderness. Six leeches to abdomen.

8 P.M.—Greatly relieved—pulse 120. Disposed to sleep. Decubitus dorsal—legs down. Respiration 36.

9. P.M.—Dr. Alonzo Clark saw him with me in consultation, confirmed the diagnosis, was struck with the effect of the leeches, and the opium treatment was commenced.

10 P.M.—Pulv. opii gr. ss. Slept from midnight till 4 A.M. April 11th, when he was assisted up and made water without pain. 7 A.M.—Lies with his knees up, afraid to cough for fear of pain; tenderness of abdomen very marked. Pulse 114. Pulv. opii gr. ss.

11 A.M.—Has slept since 10 o'clock. Pulv. opii gr. ss.

11.45.—Pulv. opii gr. ss.

2.40 P.M.—Pulv. opii gr. ss. Has slept most of the time. Appears more cheerful—voice stronger—stretches his legs without pain, though the knees are generally raised when he sleeps. 6 P.M.—Dr. Clark's visit. Has slept most of the time since last note. Respiration 36, pulse 116. Moderate pain on pressure, especially marked over the lower part of the stomach. If there be any difference the right leg is moved with greater facility than the left. 10 P.M.—Pulv. opii gr. ss., and in an hour a blister, 3 × 4, over abdomen. 11.30.—Asleep. Resp. 24.

April 12th, 12.45 A.M.—Pulv. opii $\frac{3}{4}$gr. 3.15.—Blister removed. Awakens readily; moves limbs with more freedom. Pulv. opii gr. ss. 5 A.M.—Has slept with his legs down three quarters of an hour. Pulv. opii gr. ss. 8 A.M.—Passed water with more freedom than since yesterday. Raised much wind. No nausea. Resp. 24. During the night has had small quantities of beef tea and jelly. He now took a cup of tea which he threw off with much wind, being greatly relieved thereby. 8.40. A.M.—Pulv. opii $\frac{3}{4}$ gr. Perspires freely. 10.45.—Position of legs has become a matter of indifference. Decubitus always dorsal. Complains of itching. Pulse, 100; respiration, 28. 11.45.—Pulv. opii gr. ss. 1.45.—Complained for an instant of sharp abdominal pain. 2.30.—Pulv. opii $\frac{3}{4}$ gr. 4.30 P.M.—Dr. Clark's visit. Blister has drawn well. On auscultation intestines found absolutely still. Respiration more abdominal. Pulse 100; rather less sensitiveness to pressure over abdomen. Face of good color and expression. Skin rather hot. Dislikes the powders. Laudanum substituted. 5 P.M.—Tinct. opii gtt. xviii. Has slept most of the day. Now slept from 6–7.15. —8 P.M.—Tinct. opii gtt. xx. Free from pain. Raised a quantity of wind. Passed water freely. 11 P.M.—Has been quiet. Respiration unchanged. Pulse somewhat irregular, with tendency to fall. Tinct. opii gtt. xx.

April 13th, 1.30 A.M.—Has been less quiet in his sleep. Dreaming much. Made water. 3.15 A.M.—Tinct. opii gtt. xx. 5.20—Has slept a great deal, and seemed excited. Tinct. opii gtt. xxv. 7.30.—His mother has carefully estimated his respiration when asleep at 16. Pupils not much contracted. Seems fresh and looks well. Pulse 104. Tongue with light fur, but clean tip and edges. Tinct. opii gtt. xxv. 8.30 A.M.—While asleep, respiration 12. 11 A.M.—Dr. Clark's visit. Pulse 106. Respiration 10. No increase of tympanites, and certainly no increase of tenderness. 12, Noon.—Tinct. opii gtt. xxx. Fell immediately into a deep sleep which lasted till 1.40. 3.50 P.M.—Tinct. opii gtt. xv. Respiration has been steadily at 12 while sleeping. Made a little high-colored urine with difficulty. After having been thus anxiously engaged, and held up in bed, the pulse is at 100, and respiration 14. Does not perspire. Abdomen more tense. On careful auscultation, slight borborygmus. 6.50 P.M.—After an hour and a half's sleep, tinct. opii gtt. xx. 7 P.M.—Passed water without effort or pain. 9.15.—Passed water with ease. Sleeps much. Perspires. 11.30 P.M.—Tinct. opii gtt. xxv.

April 14th, 12.10 A.M.—Made water with little difficulty. 2.20 A.M.—Has slept most of the time, but complains of "hardness" in the lower part of his stomach, and nausea. 3.45 A.M.—Tinct. opii gtt. xxv. 6.15.—Has slept; tinct. opii gtt. xx.; pulse 92. 7.40 A.M.—Pulse 96; tinct. opii gtt. xx.; urinated freely without pain. 10.30 A.M.—Dr. Clark's visit. Pulse 96; respiration 18. Expression good; tympanites markedly increased since yesterday; tenderness not increased. On auscultation, intestines appear slightly to contract. Ordered a spearmint fomentation, and a little cayenne in his soup—which he did not like. Noon.—Tinct. opii gtt. xxv. Tried ineffectually to pass water. Slept a couple of hours, and made water. 2 P.M.—Tinct. opii gtt. xxv. Respiration 18; pulse 100. Raised much wind, followed by momentary sharp pain. 3.15 P.M.—Tinct. opii gtt. xx. Vomited his soup. His thirst during the day has been great—craving very cold water. Abdomen decidedly more tympanitic since morning. 5 P.M.—Has once or twice vomited a clear fluid, with some shreds of beef from the tea. Pulv. opii $\frac{3}{4}$ gr. 6.30 P.M.—I had been absent for an hour and a half. On my return found him with hands cool. Expression haggard; pulse, 130, and weaker; respiration thoracic and hurried. Sent for Dr. Clark, who promptly came, and we concluded that he had not more than one hour to live, so rapidly did he sink. He was now vomiting a coffee-ground looking material, straining greatly. Intelligence unclouded; aware of his fate, and, like the noble little fellow that he was, thinking of others, and busying himself in bidding farewell to those around, and in remembrance of the absent. His pulse would flicker at the wrist, and would again return, and was strengthened by wine and water. By midnight it had finally ceased below the knees and elbows. Mild delirium set in during his snatches of sleep, increasing towards the morning, when he struggled violently to get out of bed, picking also at the bed-clothes, but still rational at intervals, and obedient to those he loved. By half-past six, April 15th, his respiration became automatic, and he died. Blueness of the hands and feet had not been well marked. The vomiting had persisted with some slight relief before death. Rigor mortis came on almost immediately.

Autopsy ten hours after death; weather moderate—the body having been two hours in ice. Present, Drs. Clarke, Geo. A. Peters, J. W. S. Gouley, and myself.

Countenance much altered, and stained by the post-mortem purging from the mouth. Depending parts much discolored. Abdomen alone examined.

On opening the cavity, no gas but some little serous fluid escaped. Intestines tympanitic and agglutinated together by lymph. In the right lumbar region sero-purulent fluid escaped from a cavity formed by peritoneal adhesions. The agglutination of the intestines became still more apparent as the cœcum was approached, while a faint gangrenous odor was noticeable. Intestines covered with a thick layer of lymph over the non-adherent portions. Vermiform process adherent, bent inward, and attached partly to the colon and partly to the ilium. A gangrenous ulcer on its inferior and unattached surface, about three-quarters of an inch in length, and about half the diameter of the appendix, terminated below in a perforation. At the upper end of this ulcer, the appendix contained a foreign body three-quarters of an inch in length, filling and moderately distending the appendix. Several small pieces of matter, apparently feculent, lie free in the iliac fossa, near the perforation, the largest being about the size of half a dried pea.

Intense peritoneal inflammation extended into the true pelvis, adhesions of rectum and bladder confining purulent deposits. Bladder firmly contracted. Kidneys and liver apparently healthy—the latter having its peritoneal surface coated with lymph.

Cœcum and appendix with contents removed and exhibited to the Pathological Society.

Examination by Dr. Clark of foreign body removed from the appendix.

The specimen was formed by six distinct layers, which, like those of the cornea, were susceptible of further division; these inclosed a nucleus, somewhat larger than a mustard seed, formed of condensed fecal matter, and the refuse of food. The layer immediately enveloping this nucleus displayed under the microscope very numerous fragments of the pericarp of wheat, with spiral vessels of the raspberry seed, and the spines from that or the strawberry seed, hardened by calcareous matter, which effervesces and disappears under the mineral acids. The other layers were similarly composed of condensed fecal matter, hardened by the calcareous deposit, and the outer shell was roughened with slightly projecting, uneven elevations with whitish spots. Under the scalpel, the whole gave a grating sensation from the calcareous constituents; and on exposure to the air, soon lost even the comparative flexibility which distinguished it when first removed from the body; and on section, looked not unlike a calculus.

Remarks.—It is more than probable that this case could have terminated in no other way than death; and the review of treatment only makes me regret that the leeches and the blister had not been omitted. They annoyed the patient fruitlessly, notwithstanding the apparent benefit which followed the leeches; and it is a grave question for consideration, whether they may not be entirely dispensed with in these cases of peritonitis occurring in children of this age. We are apt to do so many things in order that we can have the happiness of reflecting that nothing was left untried, if the case terminates unfavorably; and we often so multiply our agents, that we scarcely know which deserves the credit of success. But in either event, the delightful effects of opium are here patent to all. To exchange such agony as this little patient suffered for perfect repose, without disturbance of the brain, would alone stamp the agent as invaluable, though its curative effects were denied; but when both are admitted, its neglect would be unjustifiable.

Said a gentleman to me, just as he came under the influence of morphia exhibited for this very disease—"God, bless the man who discovered morphine!" And it will be long before I forget the agony of one poor boy with peritonitis, as described to me by his mother. His treatment had been strongly antiphlogistic, purgative, and mercurial; and his mother said that while yet strong enough, he would trail himself on his elbows, and dash his head against the headboard in desperation.

Since March, I have seen two cases of peritonitis in children about the same age as the one here narrated; one with Dr. B. F. Barker, where opium was perseveringly relied upon without antiphlogistic or alterative treatment, and resulting in perfect recovery; the other, which I saw during the first forty-eight hours of the disease, died on the fifth day—no post mortem made. In this a mixed treatment was resorted to, but the symptoms were of such a character as to convince me that perforation had occurred.

Case 2.—In this connection I cannot refrain from introducing my notes of a case of Ileus which I saw in the service of Andral, in 1850.

A. B., about thirty years old, robust, and well formed, came into Andral's wards, on account of severe abdominal pain. He had been indisposed for some days, and after an ordinary dinner, was seized with frequent vomiting followed by the pains from which he yet suffered. No movement of the bowels for the last three days. Abdomen tympanitic, but presenting no tumor, nor can one part be recognized as more sensitive than another. Invagination suspected, and strong purgatives recommended. This patient lived two weeks. The purgatives were ineffectual, and two days after admission fecal matter was vomited. Purgatives were discontinued, and nothing but selzer water and ice given, with ice to the abdomen. Under this treatment, the vomiting ceased, and the pain was relieved. At the same time, Andral ordered frequent injections of iced water during the day, which brought away nothing but inspissated mucus. Thus he lived during two weeks, with a pretty fair appetite, without apprehension and without symptoms of fever or peritonitis. But at last a sudden change took place, and death followed in a few hours, with the signs of intestinal perforation. The autopsy disclosed an invagination with perforation of the small intestine, at about two feet above the cœcum. Above the invagination the intestine was greatly distended and reddish, although empty.

Case 3.—I remember at this moment a German woman entering Bellevue, with greatly hurried respiration, and haggard countenance. While the nurse was arranging her in bed, I placed my hand on the abdomen, and recognized a tumor, the patient shrinking from the touch. Postponing further examination until the nurse had cleansed the patient, I went to visit others, and returning in less than an hour, found her dead.

The tumor consisted of an immense fecal distension of the transverse colon; the intestine being perforated at this site, and intense peritonitis existing. Dr. J. R. Buist was the house-physician.

Case 4. — *Measles — Convulsions — Death — Autopsy — Remarks.*—The history of the following case has always been interesting to me from its unusual character. The symptoms are so like those of scarlet fever as possibly to lead to the belief that I did not accurately diagnosticate the eruption; but from the time when I first saw the patient, I was with her night and day, and the notes of the previous history were carefully gathered from the concurrent testimony of the relatives and two attendant nurses, and it is my conviction that the eruption only made its appearance during the short period of time noted. Unless the characteristic symptoms were those of measles, then I am obliged to recognize a class of cases in which scarlatina and measles cannot be distinguished from each other—a proposition not agreeing with my experience thus far.

L. R., aged one year, weaned, robust, healthy, well-formed girl, has three incisors and a fourth pressing on the upper gum. Feb. 2d, 1857.—The nurse has thought her somewhat indisposed for a few days, but to others she has appeared as well as usual. Vomited to-day her breakfast as soon as eaten. Drowsy, listless, and irritable through the day. Face and back of head flushed. Respiration somewhat oppressed. Mustard foot-bath, and paste to chest. Feverish and irritable during the night.

Feb. 3d.—Stomach continues irritable. Bowels moved three or four times. Passages offensive, with whitish lumps. At noon a dessert spoonful of oil was given, some strabismus of right eye having been noted before that time. At 1 P.M., three sharp shrieks preceded a violent general convulsion, leaving the left side rigid for some time after the attack.

I saw her at 4 P.M., when she was apparently unconscious; moaning, hoarse voice; eyes staring; pulse very rapid; skin hot; face flushed; tongue natural. No eruption on body or fauces. Lanced the gums freely. Presently, while examining the child, as it lay naked before me, I observed marked strabismus of the right eye, and fixedness of the left; protrusion of the tongue; rigid trunk and limbs; suffusion of face and eyes, followed by marked epileptiform convulsions; jaw moving laterally, but not perpendicularly ; hands tightly flexed on the thumbs and wrists; toes and feet strongly flexed. Marked opisthotonos, and right pleurosthotonos, merging again into opisthotonos. Convulsion lasted about ten minutes, leaving the entire body rigid for about the same length of time, and ending with stertorous respiration. Hot bath.

5.30 P.M.—Four cups to back of neck and lumbar regions. Two single scarifications and then two cups over each. 7 P.M. —Another convulsion less violent and without pleurosthotonos. Passes water freely. Injection given with little or no effect; and at 9 P.M., another dessert spoonful of oil.

Feb. 4th, 1 A.M.—Unconscious still, sleeping quietly. Face less flushed; pupils now and before natural. Injection repeated and followed by two large and healthy looking passages. 8 A.M.—Pulse 160 hard, pupils as before; no return to consciousness; very thirsty; no eruption; stomach irritable. Another cup to nape of neck. 1 P.M.—Quiet, sleeping naturally as before; unconscious. 2 P.M.—Eruption of measles on ears, neck, arms and thighs; perfectly crescentic, elevated and characteristic. 8 P.M.—In the same state of stupor; eruption intensely developed. Blistering collodion to both temples.

Feb. 5th, 8 A.M.—Both temples blistered; pupils as before, responding equally to light; child unconscious as ever; resp. 53, pulse 164. Eruption has disappeared entirely since last evening and cannot be brought back. Throat sore and red, and tongue reddening like that of scarlet fever. Swallows, however, without any difficulty. Mustard bath again, and blankets steeped in hot water and sprinkled with mustard and cayenne pepper around the child.

From this time my little patient steadily sunk. Swallowed perfectly well till about twelve, when the stupor became more and more intense, and she died quietly in the afternoon without any return of the convulsion and without having exhibited a gleam of intelligence from the time of the first convulsive seizure.

Post-mortem examination.—Permission obtained to examine the head alone. Present, Drs. C. E. Isaacs and G. A. Peters.

On removing the dura mater, an excess of pearly opaque fluid seen beneath the distended arachnoid, arborescent vessels containing some red, some black blood, ramifying over convex surface of hemispheres, especially noticeable over the posterior surface of right hemisphere, where they were distended to the size of a goose quill; surface of corpus callosum healthy; veins in the fissures of Sylvius on both sides as large as goose quills; all sinuses at the base of brain greatly distended. After removal of the brain about ℥ij of serum remained in the skull. Weight of brain thirty-seven ounces.

On slicing, both hemispheres display greatly increased vascularity. The lining membrane of the left lateral ventricle greatly thickened and tenacious, as in hydrocephalus; can be lifted bodily with the forceps, the super-imposed cerebral tissue having been scraped therefrom—this tissue not being softened; some of the white substance lying on a portion of the right ventricle so hard as to be scraped with difficulty. Ventricles contain a normal amount of serum; choroid plexus markedly congested; velum interpositum showing great congestion of a vivid red color, and veins on the surface of the corpora striata apparently enlarged; fornix and corpora quadrigemina natural. Optic thalamus of left side presented on section a whitish granule displaying nothing noticeable under the microscope. Cerebellum, crura and pons healthy. Puncta vasculosa everywhere remarkable.

Cases of sciatica treated by injections of morphia.—My colleague, Dr. Barker, brought back with him from Edinburgh one of Andrew Wood's instruments for injecting living tissues with various medicated solutions. It consists of a small graduated glass syringe with canulæ so slender as to be inserted deeply without drawing blood. Tiemann has made them for me since, using an India-rubber syringe of the smallest size. I regard it as a very useful instrument, with which we can often relieve local pain in the most delightful way; and have used it in a great variety of cases—for headache, without much, if any, success; for infra-mammary ovarian pains, with temporary relief; for insupportable neuralgia of uterine and ovarian origin, with similar results; and on one occasion, in Bellevue Hospital, the relief from its use was most prompt and remarkable. A poor man, dying from an obscure intra-thoracic disease, suffered horribly with angina pectoris. When I passed through the ward he was groaning and doubled over in bed. I injected the usual quantity of the solution over one of the floating ribs on the left side. In a very few minutes he fell asleep. It is necessary to be somewhat careful with the amount of morphia used, as the effect is sometimes of the promptest, and not previously to be appreciated. Wm. Tompson was on more than one occasion intoxicated by the agent thus introduced, as was another man now under treatment, whose case may be published hereafter; and once when I injected about gtt. xx. of the solution of the acetate of morphia (gr. viii. ad ℥j.) into the gluteal muscles of a lady suffering greatly from neuralgia, depending on ovarian irritation, she had not time to walk from the bed to a sofa in the same room before she was under the influence of morphia. All that I have ever found necessary has simply been to let them sleep off the effects.

The abscesses appearing in Wm. Tompson's case were the only ones that I have yet seen, and in the opinion of the patient, they were not to be compared with the relief derived from the injections.

Case 5.—Another patient in the same ward, about fifty years of age, was treated for sciatica in this way and cured. Unfortunately, I have no notes of his case.

These injections were constantly made in the presence of the class attending my clinical lectures; and it was interesting to note the pleasure with which the two patients anticipated the injections, and the apparent gratification with which they pointed out the painful spot in the hip, thigh, or calf, where they sought relief.

Case 6.—Dr. Andrews, house-physician; Dr. B. F. Maury, senior-assistant.—Wm. Tompson, 27 years of age, butcher. Aug. 6th, 1857.—The patient, a hale, hearty man, was seized with pain commencing in the left gluteal region and extending thence along the course of the sciatic nerve, down the thigh, and into the calf of the leg. After submitting to treatment without relief, he applied for admission into Bellevue Hospital Dec. 2d, 1857. No febrile disturbance, but intense pain, and the limb is so drawn up as to produce great deformity and render a crutch necessary when the patient leaves his bed, where he was obliged to remain most of the time when he came under my observation. Patient's general condition good; digestion and the other important functions well performed; no indication for tonics. Alteratives, anti-spasmodics and narcotics produced only temporary relief. Cupping, leeching and blistering along the track of the nerve had no better effect. The acupuncture also failed.

Feb. 27th, 1858.—I injected ♏ xx. sol. morph. acet. gr. xvj. ad ℥j. near the upper border of the great sciatic notch, the nozzle of the canula being made to touch bone before injecting the solution. (This I have often done, and I have endeavored to throw the solution against the nerve itself; but I do not think that one gains more in this way than when the canula is simply introduced for half an inch, or an inch.) Patient slept well that night, and was greatly relieved for a couple of days.

March 4th.—Pain returned, but in a different spot along the course of the nerve, and not so intense as before. Injection repeated.

March 6th.—Patient begs for a repetition of the injection; says that he has been more relieved by this than by any other treatment. Points out two painful places, in each of which gtt. xx. were thrown. Said in the morning that he had been quite tight in the night, and walking about the ward without knowing where he was. *8th.*—Gtt. xx. again injected.

March 15th.—The injections were suspended until Tiemann could make me an instrument; and the deformity, which had nearly disappeared under their use, was now as bad as ever, and the pain very severe. Injections were now resumed, and ♏ xx. were followed by sleep and great relief. 16th.—♏ xx. of a solution half the strength of the former, which was found to be insufficient to afford entire relief. 17th.—Injected ♏ xxv., gr. viij. ad ℥j. 19th.—Injected ♏ xx., gr. xij. ad ℥j. 21st.—Injected ♏ xx., gr. xvj. ad ʒj.

The narcotic now relieves pain without producing profound sleep; the appetite at night and in the morning is poor, but the patient says that he makes up for it at dinner. The injections were kept up, but at longer intervals, until the 1st of April, when they were no longer needed; the patient moved about without his crutch; the contraction of the limb had in a great measure disappeared; and the only disagreeable feature in the case was the appearance of two abscesses, or furuncles, one in gluteal region, and one in calf of leg, supervening upon injections in those sites. These, however, were small matters and produced no permanent inconvenience, and he soon after left the hospital.

Case 7.—Carcinoma of pylorus.—Drs. E. W. Lambert, house-physician; Foster Swift, senior-assistant.

The following typical case was frequently examined by the clinical class at Bellevue.

Henry Ennis, aged 59, born in New Jersey, widower, mason by trade. Has always been healthy; no hereditary or acquired taint; temperate in habits. First had his attention attracted to his disease by pain in the pit of his stomach, about the middle of May, 1858. Bowels inclined to be costive, and kept open by Brandreth's pills. About a month later began to vomit in the morning, half digested and very acid food which he had eaten the day before. This would occur three or four times a week, and when attended with much straining he would throw off from half a pint to a pint of darkish-colored fluid. These attacks were rather preceded by pain at the pit of the stomach than by nausea. We cannot learn that he vomited glairy mucus. As these attacks continued they became more frequent, and if he attempted to lie on his back after a hearty meal, it would immediately regurgitate. He always tasted his food after having eaten it.

Appetite, strength, and flesh gradually failing, he was obliged to enter Hospital, July 28th, 1858. Greatly emaciated, of cachectic appearance, complaining of nausea and loss of appetite. About six hours after eating he would vomit half digested food. The dark-colored fluid alluded to could not be obtained for microscopic examination. During his stay in the Hospital he was given fluid nourishment, with tonic and carminative remedies, with an occasional enema.

On examining the abdomen, some enlargement of the superficial branches of the external epigastric and mammary veins noticeable, also a tumor, very hard to the touch, and measuring three and a half inches in its long diameter by three inches transversely, movable by the touch, and occupying different positions on different days; for instance, so situated on August 12th, that a line drawn transversely to the umbilicus would divide it into equal parts, while on the 14th it lay an inch and a half below the umbilicus and an inch to the left of the median line. This displacement seemed to depend upon alterations in position of the stomach itself. On many occasions the outlines of the stomach could be distinctly traced, the greater curvature being sharply defined, and the organ then markedly tympanitic. Vermicular contractions could never be observed or induced by brisk friction, though the abdominal parietes were very thin.

By the end of August the stomach would retain nothing, and the patient had to be supported by nutrient enemata.

Sept. 2.—Died.

Autopsy—fourteen hours after death. Weather warm; body pale and emaciated; tumor still noticeable, but slightly less prominent; stomach much distended, extending on left side from ant. sup. spine of ilium to 6th rib; adherent to the liver under the umbilicus for the space of a square half inch; full of dark-colored grumous fluid; cancerous ulceration involves pylorus, and a continuous surface measuring three inches by two, bounded by a hard ridge; liver, where in contact with stomach, for a space of one inch by one and a half, scirrhous, otherwise healthy; lymphatic glands of stomach the size of filberts, enlarged and hardened. Other abdominal and thoracic viscera healthy. Head not examined.

Case 8.—Rigid os—Douche, etc.—Forceps to head transversely placed in pelvic excavation—Mother recovered—Child dead before delivery.—McCudder, aged 32; first pregnancy; fell in labor August 26th, 1858, in Bellevue Hospital. Dr. E. W. Lambert, house-physician, and Dr. Foster Swift, senior-assistant. Presentation R. O. P.

This patient was seen at 6 A.M. on the 26th, when the os uteri was as large as a dollar, waters, according to her account, having been dribbling away for several days. Having remained in this condition for twelve hours, gr. xv. of ipecac. were given and the warm douche applied by the house physician. Five hours after, no material progress having been made, the douche was repeated and chloroform given.

Aug. 27th, 2 P.M.—The patient was reported to me as one on whom the douche had made no impression, though the stream had been steadily thrown against and within the os uteri. On examination I found the os of the size and apparent rigidity described, but on introducing my fingers, and forcibly dilating it, full dilatation was almost immediately effected.

8 P.M. I was sent for by Dr. Swift, as the woman was showing symptoms of decided exhaustion, vagina becoming hot, and the head having simply so altered its position as to present its sagittal suture transversely with post. font. to right ilium. The fœtal heart seemed to me inaudible. I applied the forceps with pivot with one blade over the left temple of the child, and the other behind the right ear, and rotating the occiput under the pubis, delivered a dead male child weighing six and a half pounds, having the cord twice around the neck. Woman did well.

Remarks.—This case is published as an additional illustration of the value of never neglecting manual dilatation of the rigid os; and I am sure that many of the cases in which the douche is supposed to have failed, come within this category, the os preserving the same dimensions and the same deceptive feel of rigidity which originally motived the douche, but now yielding to the dilatation of the fingers, as brown paper would do when wetted. Further examples of this have been previously published by me in this Journal, and, indeed, the principles regulating employment of the douche for rigidity of the os and cervix, are: 1st. Injection of a sufficient stream within and against the os and cervix. 2d. Tentative manual dilatation to see whether the semblance of rigidity may not alone remain.

In such forceps cases, the handles must be widely separated, and in them it seems to me that the pivot is of value. It is to be regretted that I did not perform the operation when I dilated the os uteri at 2 P.M., as the child would then have been saved; but one always feels inclined to rely more on the powers of nature than the result would often justify. It is possible, if not probable, that in this, and very many similar cases, the child may die from the simple tightening of the cord in the movement of rotation, just one half the necessary distance having in this case been traversed. When I arrived at 8 P.M. the fœtal pulse must have just ceased, as Dr. Swift had heard it some time before; and although it was not audible when the operation was commenced, yet how strongly would its sudden cessation justify the application of forceps, even though no other circumstance called for their use.

Case 9.—Rigid os and lingering first stage—Douche—For-

ceps—Mother recovered—Child died on third day, from other causes.—Elizabeth Warren, aged 25, first pregnancy, in labor in Bellevue Hospital, from Nov. 22d, 1857, at 11 P.M., to Nov. 25th, 9 A.M. Female child, eight and a half pounds. Dr. C. F. Hasse, house-physician.

When first seen by Dr. Hasse, the membranes had prematurely ruptured; os dilated to the size of a two shilling piece; head in first position; pains irregular; scarcely any effect on cervix. An emetic and enema were followed by an anodyne.

Nov. 25th, 2 A.M.—Os dilated a little more than half a dollar, rigid and slightly swollen; vagina becoming hot. Two warm douches with very favorable effect; 7 A.M., almost complete dilatation; fœtal head still obstinately engaged just within the brim of the pelvis. Fearing further risk to mother and child from the continued pressure, I delivered the latter, living, with Simpson's forceps. The mother, who was a hysterical woman, was for some time inclined to puerperal mania, but finally recovered perfectly.

Nov. 28th.—The child, which was doing well, died suddenly in a convulsion.

Case 10.—*Arrest of head by promontory of sacrum—Forceps—Both did well.*—Mary Conroy, aged 26, first pregnancy, in labor from Oct. 28th, 5 A.M., 1857, to 29th, 9.30 A.M. Dr. J. R. Buist, house-physician. In this case the head was retained in one place by the promontory of the sacrum for fifteen hours, when I delivered a male child weighing ten pounds, with Simpson's forceps. Both mother and child did well.

Case 11.—*Forceps in superior strait—Both did well.*—Ann Mahony, aged 33, first labor, from May 26th, 1857, at noon, till May 28th, 6 A.M. Dr. John C. Draper, house-physician. In this case the head was arrested in the brim, and I finally delivered a female child weighing six pounds, with Simpson's forceps. Mother and child recovered perfectly.

43 West 32d street.

Art. V.—*Cases of Puerperal Convulsions, with Remarks upon the Treatment of Eclampsia.** By E. N. Chapman, M.D., Physician to the Long Island College Hospital, Brooklyn, N. Y.

From some general cause, probably atmospherical, puerperal convulsions and puerperal fever have been more than usually prevalent for the last six weeks. Undoubtedly the epidemic has not as yet reached its height, and we, all of us, may be called to cases of this description, which will demand of us very careful treatment to bring to a successful issue.

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* Read before the Medico-Chirurgical Society of Brooklyn, March. 1858.

Most authors make three varieties of puerperal convulsions: hysteric, epileptic, and apoplectic. The first division is a simple form of hysteria, and improperly placed among its more grave compeers, excepting that at times the hysteroid type at the outset rapidly assumes the epileptic character, as I have observed myself in one fatal case. All convulsive movements, however trivial and unimportant they may appear, must be carefully watched when they occur in the last months of pregnancy, during labor, or immediately subsequent to confinement. Eclampsia is prone to occur at these periods, and there is a natural tendency for this disorder to supersede, at these times, the various forms of hysteria.

Frequency.—From statistics collected by Churchill, we find that 79 cases of convulsions occurred in 38,306 cases of labor, or 1 in about 485.

At Dublin, 30 cases in 1,600, or 1 in 53 labors. From the year 1829 to 1842, at the Maternité, Paris, at the Clinique d'Accouchments, the disease occurred 10 times in 12,500 labors, or 1 in 1,250 cases. A vast difference, and perhaps inexplicable. I would suggest a colder climate and frequent electrical changes of the atmosphere, as a reason for its greater frequency in England and Ireland.

Class.—Primiparous women are the greatest sufferers. Of Merriman's 36 cases, 28 were with first children; of Ramsbotham's, two-thirds; of Collins's, 75 in 85 cases. Nine cases have fallen under my notice—seven epileptiform, and two apoplectic. Of the first class, four were first pregnancies; of the second class—apoplectic variety—neither of the two were primiparous.

Mortality.—The mortality from this disease, in former times, and even as late as the age of Hunter, was fearful. At least 75 per cent. of those attacked perished. The treatment consisted of nervines and anti-spasmodics, but blood-letting was interdicted and considered highly inappropriate.

In later times, with a more fearless use of the lancet, the mortality has been very materially diminished; but still we have to acknowledge the loss of a heavy per centage of our cases. We are not past improvement yet.

Colombat states that in France one-half of the cases die. Churchill, from different authors, gives us a table of 152 cases; of these, 42 mothers were lost, or more than one-fourth.

Dr. Collins, Dublin, had 30 cases, and lost 5—between 16 and 17 per cent.; Dr. Meigs, Philadelphia, 20 cases, and lost 3—between 14 and 15 per cent.; Dr. Huston, Philadelphia, 12 cases, and lost 2—15 per cent. I have seen seven cases of pure eclampsia; of these two died. In two apoplectic cases, no treatment was adopted, neither patient living but a very short time.

I find no tables illustrative of the comparative fatality of this disease, at the three epochs when it may assail the patient, viz., before delivery is possible, when delivery is practicable, and after the birth of the child. Statistics on this point would be interesting, and I may say absolutely necessary, if we would draw an inference as to the relative efficacy of different modes of treatment, or the superiority of any particular mode of management, at a peculiar stage of the complaint. A broad distinction certainly exists between those cases of the first and third class, where we must rely on medical treatment alone, and those cases of the second class, where we terminate both the fit and the labor by an artificial delivery, without aid from any medicine whatever. Where delivery is possible, most of the cases recover, for the very good reason that we remove the cause. Antecedent to labor, convulsions are of the most grave and serious character, and must give by far the greatest ratio of deaths.

Etiology.—The etiology of this terrible malady is left in great obscurity by writers on this subject, and they make their statement of causes in a very loose manner. Evidently they know but little definite on this point beyond vague generalities, affording no fixed data on which to found a rational treatment. How, I would ask, are we to benefit our patient, when we are ignorant of the very essence of the disease, and are driven to the painful necessity of fighting an enemy in the dark? The causes suggested are atmospheric or endemic; the puerperal condition; excentric, as sympathy with the stomach, bowels, or uterus; mental emotions, fright, difficult and tedious labor, causing an accumulation of blood in the head, and pressure on the sacral nerves, etc. First causes are not reached in this catalogue, and we must, if we look no deeper, be satisfied with some trivial exciting cause.

Certainly, at times, there is an electrical condition of the air predisposing to eclampsia. The puerperal condition, however, is a *sine quâ non*, and without this, exciting causes produce no effect. Under other conditions we have no similar affection, that may occur only once during a person's life. We are led to consider, for these reasons, that the uterus, with its sympathetic reactions on the nervous system, as the starting point in the causation. Other causes are but secondary. An enlarged uterus, with greatly augmented nutrition and nervous susceptibility, is primary and the first link in the great chain of causes.

From this great and universal predisposing cause, we have two others derived from it—an increased nutrition, and an augmented irritability of the general nervous system. There is a tendency in the pregnant female to a full habit—often the blood becomes of a rich, highly stimulating quality, holding fibrine and red globules in great excess, with very little serum when coagulated. In one case, 40 ounces of blood had less than 3 ounces of serum. I have made the same observation in every case where I have noticed the blood. We can readily conceive the effect that must be produced by having blood of this character forced on the brain under the stimulus of powerful convulsions frequently repeated. This makes one class of our cases—the congestive type—and if we would credit most modern authors, the only type; more than this, they consider congestion of the brain as the sum total of the disease, with no exceptions, and the treatment is predicated on this assumption.

I shall take the liberty of adding a second class which we may call the nervous type. In this instance the blood is not in excess nor highly organized, and very often we may have the very opposite of these two conditions—great deficiency of blood and profound debility or exhaustion. There is less congestion in the head of an active character, and often none whatever. The convulsions are due to the sympathetic relations of the uterus; though the immediate exciting cause may be the irritation of almost any portion of the nervous system, as the stomach, bowels, pain of any kind, fear, anxiety, etc. Convulsions after delivery mostly fall under this head.

The presence of a dead fœtus in utero is a frequent exciting cause, from which, doubtless, though not decomposed, a virus is absorbed which acts with powerful energy on the nervous system. Three of my cases were delivered of fœtuses, dead previous to their seizure with convulsions. Another cause is the suppression of bile or urea in the excretions, originating from that mysterious uterine sympathy, as its prime cause, and producing on the general system such profound effects as to abolish the functions of organs whose secreting and excreting is mainly under the nervous system—more practically the organic nervous system.

After delivery, in addition to this uterine element, we have, as an exciting cause, as surgeons would say, the shock of the operation—the sudden change on emptying the uterus of its contents.

The distinctions made above, appear to my mind of the first importance practically; if true, we are liable greatly to be misled by systematic writers, who give us a routine treatment for all cases; viz.: the depleting, or antiphlogistic kind, the treatment for congestion of the brain.

Preliminary to relating the cases which more particularly engage our attention in this article, I will give the details of two cases which I deem apoplectic.

Case 1.—Mrs. S., Amity street, the mother of one child, and the subject of frequent miscarriages, healthy, full habit, in the sixth month of pregnancy. She ate cabbage with vinegar for dinner, and shortly after was taken with cramps in the stomach. About 3 P.M. I was sent for and prescribed an emetic to be fol-followed by laudanum until the pain was relieved. My directions were disregarded. She continued almost frantic with pain, when suddenly, about 10½ o'clock in the evening she fell back insensible, with little or no convulsive movement. When I arrived at 11½ o'clock she was completely comatose, and evidently in a dying condition. No treatment attempted. She died in less than two hours' time.

Case 2.—Mrs. F., Amity street, mother of several children, after natural, easy labors; became jaundiced during the three last months of gestation. The jaundice persisted up to the time of her confinement. She had an easy labor. A few minutes after I left, her sister found her walking around her room apparently in search of something, but entirely beside herself. She was put in bed, and at first had to be restrained; afterwards she was quite passive, with marked evidences of pressure on the brain—no flooding. No treatment adopted. The patient lived only three hours and died apoplectic.

As observed before, I consider such cases as these a pure form of apoplexy, requiring no special treatment, excepting, where possible, delivery should be hastened by all justifiable means.

I will now give the details of some cases of epileptiform convulsions.

Case 3.—About five years since, Dr. Turner called me one evening to see a case of puerperal convulsions. I found a thick-set plethoric German woman, eight and a half months pregnant with her first child. She had had four or five convulsions, and now lay with stertorous breathing—pulse full and strong—œdema of face hands and feet; no signs of labor. The doctor had been with her about two and a half hours—had taken 20 oz. of blood, and given two teaspoonfuls of McMunn's elixir in divided doses without any improvement.

By my suggestions we gave her sufficient antimony to produce free vomiting four or five times and afterwards attempted to keep up its sedative, contra stimulant effects by smaller doses repeated every half hour. In this instance we gave ¼ gr. doses. If there was no vomiting, and the face instead of being pale was flushed or suffused, the quantity was to be increased without any definite limit. The idea was to give all the stomach would bear, and generally when there is fullness of the head free doses will be tolerated. After the emetic she had no more convulsions, but lay quite easy though insensible; the friends thought her asleep, therefore they omitted the medicine. Two hours after she was seized with convulsions as severe as at first, and had two before we arrived and resumed the antimony. We at first gave sufficient to vomit and then in divided doses as before. The convulsions again disappeared on vomiting, and did not recur. She remained insensible, stupid for twelve hours; then gradually, with incoherent talking, recovered her senses; went two weeks, and had a perfectly natural labor, but the child was dead. Excepting ice to the head, nothing was used but antimony.

Case 4.—About three and a half years since, Dr. Brooks sent for me at 12 o'clock at night, to assist him in a case of puerperal convulsions. The doctor had bled her to the extent of 16 ounces, but had, as yet, given no medicines. Found a slender, highly nervous female in labor with her first child; the pains had come on during the evening; os uteri dilated to the size of a quarter of a dollar and rigid; uterus constantly hard; pupil not responding to the light; evidences of an excess of blood in the head. Four or five convulsions had occurred, with stertor in the intervals.

Gave antimony as in the first case. No convulsions after vomiting, but a persistent insensibility during the night. In the morning, expulsive pains set in, and she was delivered naturally of a seven-months fœtus, that bore evidences of having been dead antecedent to labor. In subsequent confinements she has had no trouble.

Case 5.—On the 4th of last month, at 9 A.M., I was called upon by Dr. Crane to visit with him a case of puerperal convulsions. We found a full-blooded, thick-set woman (American) enciente with her first child; pulse tense and corded; hands, face, and feet swollen; no signs of labor; uterus constantly hard; free secretion of urine up to present time.

The history of the case was, that she had complained for several days of a pain through the centre and back of the head; the day previous had eaten hard clams for dinner; felt uncomfortable during the evening; in the night was sick and vomited several times, and in the morning her bowels acted once or twice. At 7 o'clock she went into convulsions, which had occurred four or five times when we arrived. She lay quite insensible with stertor only a few minutes after the fits.

We bled the patient 40 ounces; gave antimony and applied ice, as in the other two cases; in addition, gave croton oil and turpentine injections; no response from the bowels. The blood formed a solid coagula, with less than 3 ounces of serum.

Either from irritability of the stomach, from indigestible food previously taken, or perhaps from the large bleeding depleting the brain too much, the smallest quantity of the antimony was thrown up; even an eighth of a grain—evidently not sufficient being retained to produce the least salutary effect.

In this case there was much less hyperæmia of the brain than in the two other cases. The stertor only lasted for a moment after each fit. On more carefully observing our patient, I had convinced myself that the grand feature in the case was nervous irritability, as vomiting brought on a fit, and even a vaginal examination, a tremor. At 12 M. we were debating between chloroform and morphine. The doctor was strongly in favor of chloroform—I, equally strong in favor of morphine. Seeing Dr. McClellan pass, we called him in to help us out. Dr. McClellan was most decidedly in favor of chloroform.

Chloroform was now resorted to, and the patient was kept under the influence of this drug from one to six o'clock, when it was omitted, and we waited for results; no spasms after one o'clock. For half an hour she slept quite easily; then suddenly sprang up in bed, standing on her knees, and called for the chamber. The attendants laid her down, but for five or six minutes she continued struggling and crying out; when suddenly she lay back apparently dying; cold, clammy sweats and a deadly pallor; pulse a mere thread and uncertain. About nine o'clock the doctor repeated the examination. We both of us had examined her many times during the day, and found no signs of labor. He now found the os uteri dilated and the bag of waters protruding. I returned a quarter before eleven o'clock, and found a constant uterine effort, like that from ergot; no urine in the bladder, and none secreted during the day, unless passed involuntarily; patient perfectly sensible, and would respond intelligibly, though very feebly and in a whisper, to questions; no mucous râle; breath free; countenance deathly; pulse unequal and of uncertain force; some pulsations scarcely felt at the wrist.

We gave brandy, and left her to nature. At half-past eleven o'clock the child was born; in three minutes after she was a corpse. The breath and pulse seemed to stop simultaneously. I imagine that the stimulation of the organic nerves from labor gave the woman, for the time being, an artificial life not natural. The child was dead, and had been for several days.

Case 6.—Mrs. B., Smith street; nervous temperament; spare habit; the mother of several children after natural labors; was being confined with her fourth child; while the os uteri was becoming fully dilated, pains strong and expulsive, she suddenly went into convulsions, and in the intervals was insensible. The pains now became ergotic; uterus hard as a stone, with no relaxations. I attempted to push the anterior rim of the os uteri above the vertex, and after two efforts succeeded; the constant tension of the uterus above helping very materially. In less than half an hour labor was completed, at which time consciousness returned. Subsequent convalescence natural. No trouble in two labors since.

Case 7.—Nearly four years since, Dr. Brooks called me to see a young woman in labor for twenty-four hours with her first child. Several convulsions had occurred during the last three hours, with stertor and insensibility. Patient of a nervous temperament; no extraordinary fullness of the head. She had been bled 16 ounces and colds applied to the head. We delivered her with the forceps of a living child; no more convulsions, and recovery as after natural labor.

Case 8.—About eight years since, Dr. Atwater called me to assist him in a case of labor with convulsions. Found a young woman confined with her first child; nervous temperament, with little or no congestion of the head, but frequent convulsions, followed by stertor for a few minutes after; child's head impacted; woman evidently exhausted with her efforts. The doctor had bled her, etc. We applied the forceps and delivered her of a living child. Convalescence natural but tedious.

Case 9.—On the 24th of the last month, at 6 P.M., I was invited by Dr. Brooks to see a patient in Baltic street, delivered in an easy labor the evening previous by a midwife. During the night she was sleepless, and suffered from pain in the head. In the morning she commenced laughing and sobbing, and shortly after was convulsed—evidently at first hysterical, but, after a few repetitions of spasms, they became epileptiform. Dr. Brooks bled her 16 ounces—applied ice to the head—a blister to the nape of the neck, and gave cathartics and injections. No benefits resulting, chloroform was given to the extent of three ounces with a like result. Convulsions every ten or fifteen minutes of varied intensity; occasionally very severe; no stertor, but profound insensibility; no heat of head, or apparent congestion; pupil inactive; skin moist; uterus hard, and in a constant state of contraction. Convulsions had continued twelve hours without intermission.

We gave her ½ gr. morphine to be followed by ¼ gr. doses every hour. She had only two light spasms up to 10 o'clock in the evening; afterwards they did not recur. She lay quite insensible; precisely the same as she did at first between the convulsions—rolling her eyes about with a meaningless stare. Gradually she became more exhausted, and died the following evening.

In all of the seven cases detailed above, there were several symptoms, as far as observed, always constant—uterus constantly contracted with no relaxations; pupil of the eye contracted and insensible to light, probably from the tension on the nervous system, and most certainly, in some of the cases, not from congestion of the brain; blood highly organized.

Of these seven cases, five recovered; three by effecting delivery, and two by the free use of antimony. The two in which chloroform was given died. They passed away without a struggle, as though the nervous power was exhausted, perhaps from the chloroform—perhaps from the disease.

This powerful agent diffuses itself along every nerve of the body. Then comes a calm—a deceptive calm—the outward manifestations of disease are hushed, and though the symptoms cease, the cause of disease is not removed. The calm—the treacherous sleep is changed to the stillness of death.

I have seen the same result produced by those dangerous doses of opium recommended by Prof. Alonzo Clark in puerperal fever. I protest, in the strongest terms, against the present fashionable use of chloroform in convulsions, especially as we must keep up its influence for several hours to gain the end required.

We come now, gentlemen, to a most important branch of our subject, viz., the treatment.

I find that all of our writers, who are established authorities on this subject, unanimously recommend a treatment identical with that for congestion of the brain, viz., bleeding, cathartics, cold to the head, stimulating injections, blisters, etc. The chief difference lies in the extent to which they carry depletion; some are for small bleedings, and others talk familiarly of taking 60 to 80 ounces at one time, and repeating the bleeding as often as the congestion requires it. They feel quite certain that the only thing to fear is congestion, and every other pathological condition that may exist, and perhaps does exist, is entirely ignored. Great caution is directed to be observed in the use of opium; few consider it applicable, or at any stage indicated, unless it be in exceptional cases. This caution necessarily grows out of their theory of the disease.

There are two methods of treatment varying from the established mode, which we ought attentively to consider, as they afford the greatest ratios of cures, viz., the treatment of Dr. Collins, Dublin, and the Philadelphia practice as described by Prof. Meigs.

Dr. Collins, after using depletion, antiphlogistics, and the other means generally recommended, if the case demands it, commences the use of opium and antimony in combination. He maintains that opium may be given in many head affections, particularly those of a congestive character, so as to produce all the sedative, anodyne effects of the narcotic with no unpleasant symptoms by its combination with antimony. He thinks that the antimony guards and modifies the action of the opium in such a manner as to obviate its tendency to increase congestion. Vomiting is cautiously avoided. Previous to resorting to this plan, which he considers applicable when other means fail, he gives the systematic treatment a fair trial. He would wait, even, for a cathartic to operate, which would occasion the loss of several hours—perhaps to the patient invaluable time. He lost from sixteen to seventeen per cent.

The practice followed by the best physicians of Philadelphia, as represented by Prof. Meigs, consists of the usual treatment, with a much more liberal use of the lancet. They coolly talk of taking 60 to 80 ounces of blood at one bleeding, ready, if they see occasion, to follow it up by smaller ones, frequently repeated. After bleeding and relieving the bowels, they resort to sedative doses of opium, to be given every hour till the full effects of the drug are produced. This plan is considered applicable, without any distinction, to all cases. They report a mortality of fourteen to sixteen per cent.

The great feature—the general character—of all convulsive diseases is the same. The starting point is some irritation of the nervous system, sufficient to disturb the nervous influence and set up an irregular action, called spasms. When the cause is greater you have a more profound, lasting and dangerous disease. The continuance and frequent repetition of convulsions has a natural tendency to fill the head with blood, which may end in a permanent congestion. This holds true in all convulsions. The convulsions of children—the convulsions from the non-appearance or retrocession of an eruptive disease—arise primarily from an impression on the nerves, and resulting very often, as in the disease before us, in congestion of the brain. Here, also, we require the same general principles for our guide.

The treatment of puerperal convulsions naturally divides itself into three several periods: before delivery is possible; when delivery is practicable; and after the birth of the child.

In the first period a moderate bleeding, for once alone, from 16 to 30 ounces, is advisable, when the violence of the convulsions fills the head with blood. Where we have no head symptoms, it is worse than folly. We bleed not with the intention of curing our patient by depletion, but as preparatory and auxiliary to more powerful means. We might bleed six or eight times, and still after the next convulsion have as much blood in the head as ever—or I would say, apparently so. Directly following the bleeding, or without it, if it is not considered advisable, we would give tartar emetic in full doses—$\frac{1}{4}$ gr. every ten minutes—until the patient vomits freely three or four times. This should be done to insure its full effect. The impression thus produced is prolonged by repeated doses of from $\frac{1}{4}$ to $\frac{1}{2}$ gr. every hour.

I consider that the antimony has a double action—the one sedative and anti-spasmodic; the other, antiphlogistic and contra-stimulant—and that from these combined effects it has great power in diminishing the capillary circulation. On this principle I would explain its action in congestion and inflammation of the lungs. It appears to me to exercise the same power in head affections, for the same reasons. To produce favorable results, the antimony must be given at an early stage, before the congestion is permanent. This remedy is particularly adapted to those cases in which there is great turgescence of the head, and generally free doses will be tolerated. In the opposite condition of the brain, vomiting will be apt to occur from the smallest quantity, and it may not exercise the least power over the disease. In such a condition, opium is our reliance.

I have used tartar emetic in those fearful cases of scarlet fever when the eruption has failed to appear or has receded, followed by congestion of the brain, with or without convulsions. It has succeeded, when used sufficiently early, in my hands better than any other treatment whatever. I can recall to mind several cases that recovered under the most desperate circumstances.

In concussion of the brain, when reaction comes on, the tartar emetic is far superior to all other known remedies; in most cases, depletion, general or local, is quite unnecessary.

One great argument in favor of the antimony is, that though it should fail to put a stop to the convulsions, it prepares the way, in the congestive cases, for the administration of anodynes. When the active congestion is relieved, or does not exist, the full doses of opium, as advised by Dr. Meigs, are superior to any other plan.

As to the chloroform which is so generally administered in this condition of things, I have already expressed my opinion.

Secondly, the treatment when delivery is possible. Here the course to be adopted ought not to admit of much dispute. Most authorities, however, only sanction the application of the forceps; but any other interference or means of hastening the birth of the child is interdicted. It is thought that turning might aggravate the spasms. We should empty the womb of its burden by any justifiable procedure the most appropriate to the circumstances, without delaying to bleed, or wasting time in following out any preliminary treatment. After the child is born, we can meet the demands of the case with better hopes of success.

Cases of convulsions that commence before or during labor and persist after its completion, will have resulted very likely in a permanent congestion of the brain, and they must be managed accordingly. If this condition has not been produced, our hopes are in opium. Where convulsions take place for the first time after confinement, we have a state of things entirely different from the two other divisions. The shock to the system—perhaps nervous prostration—never occasions too much blood in the head, even of a passive character. Cases with great exhaustion from protracted labors, either natural or artificial; cases rendered doubtful by profuse hemorrhage, fall naturally under this same head. I cannot too strongly give my disapproval of the routine practice under such circumstances.

The remedy that will do us most service in such a crisis, worth all others combined, is opium in full and sedative doses; any depressing agent is out of the question.

ART. VI.—*On the Oxysulphuret of Antimony as an Expectorant in Inflammatory Diseases of the Infantile Respiratory Organs.* By A. JACOBI, M.D. Physician to the Children's Department of the (Canal street) German Dispensary.

THE oxysulphuret of antimony, although mentioned by Basilius Valentinus in the fifteenth century, was made known for the first time in 1654 by Glauber, who prepared it while operating on the metallic antimony. Although generally well known from that time, there is scarcely another chemical preparation for which more different modes of preparation have been recommended, the chemical composition of which has been sought in more different ways, and the pharmaceutical and medical reports on which are more various and even contradictory. Now, it not being our intention to write a treatise on the chemical constituents of the oxysulphuret of antimony, we shall rest satisfied with merely laying before our readers what we sincerely believe to be the best method of preparing this remedy—one we have largely employed in our practice, and the results of which we are about to give to our professional brethren.

The sixth edition of the Prussian Pharmacopœia (1846) gives the following prescription for preparing the oxysulphuret of antimony: 3 pounds of common carbonate of soda are dissolved in an iron vessel in 15 pounds of water, and are well mixed with a pound of lime made half fluid by three pounds of water, with 2 pounds of the black sulphuret of antimony, and with 4 ounces of flowers of sulphur. This mixture is to be boiled for an hour and a half, the evaporating water being always compensated by filling up anew. The remainder is again boiled with 6 pounds of water, filtered and washed out with hot water. The fluid is made to crystallize. The crystals are washed out with distilled water which has been mixed with $\frac{1}{160}$ of potassa, and afterwards dried. One pound of them is dissolved in 5 pounds of water, the whole filtered and diluted again with 25 pounds of water. A mixture of 4½ ounces of sulphuric acid and 8 pounds of water decanted after refrigeration is then added. The sediment is filtered, washed out with common water at first, and with distilled water afterwards; is then pressed out between blotting paper, dried in a dark place, in a temperature of 77° Fahr., reduced to powder, and kept in a dark, well-closed vessel.

We omit the description of any physical and chemical qualities of this preparation, but give the analysis of Berzelius and H. Rose, the best analytical authorities. Both of these declare it to consist of 2 atoms of antimony and 5 atoms of sulphur ($Sb^2 S^5$), or of 61.59 equivalents of antimony and 38.41 of sulphur. It has been called by Liebig the persulphide of antimony.

We have given in full the mode of preparing this drug, which we make use of in our own practice, for obvious reasons. The principal objection to the oxysulphuret of antimony has always been that it was so extremely liable to decomposition as not to be administered with any degree of surety. It has been asserted that there is always oxide of antimony formed in what is presumed to be the genuine article, and undoubtedly it is very often found. Sulphur too is formed, even in the shape of sulphuric acid, from decomposition induced principally by the influence of air and light. As to the latter influences, and those of a similar kind, it is evident that it is not the fault of the chemical preparation, if the conditions necessary to its un-altered state are not given. Nitrate of silver in solution, prussic acid, and many chemical substances require the greatest care in preserving them; nevertheless, no one ever ventured to object to their administration in medical practice. It is true that great care has to be taken in preparing our medicament; that it requires washing out finally in distilled water instead of common water; that it needs to be dried slowly at a certain temperature, and kept under peculiar external conditions; it is true, besides, that the many other ways of preparing it are unsafe and give rise to decomposition; but after all, we see no reason to declare a substance to be subject to decomposition, if it can be proved that it is easily decomposed only when made by a wrong process and kept under unfavorable circumstances.

Another objection to the medical use of the oxysulphuret of antimony has been that it is soluble in alkalies and might undergo decomposition in the stomach when the secretions happened to be abnormally alkaline. It has been asserted that it is decomposed too by acids, however slight they be. Now, we are unable to see, if indeed decomposition would easily take place, why a medicament ought not to be given for such a reason. If the secretions of the stomach are too alkaline, make them less so; if acid drinks will decompose your medicine, do not administer them. There are a great many other medicines requiring the same and more precautions; it has never been urged as a reason against the medicinal use of the nitrate of silver that its tendency to decompose, either by the secretions of the stomach or by ingested food, makes it unfit for internal administration.

The truth is, that the oxysulphuret of antimony has not been in general use for a long time; twenty-five or fifty years ago it was highly estimated, but the majority of writers at the present day, appear to scarcely know of its existence. In order to show this, we will give some literary notices, particularly such as have been taken from authors on infantile diseases, it being our object to communicate a few observations on the mode of operation of the oxysulphuret in diseases of children, and to recommend it for further use. We will premise that we desire our readers to give their special attention to the dose of this remedy, it being our firm conviction, after a great number of observations, that the want of success often complained of in its administration, and the want of confidence in its power is but the consequence of an entire mistake as to the amount to be given.

Behrends administered one grain every two hours in the second stage of pneumonia, when expectoration was deficient and strength was failing, in combination with camphor and benzoic acid. Jahn gave one grain three or four times a day, in pulmonary catarrh, with opium and camphor. Richter gave one grain twice a day, in acute catarrh of the stomach, with tartrate of potash, and two grains twice a day, in chronic arthritis, together with calomel and aconite. Brera employed a fourth of a grain every three hours, in painful arthritic affections, with morphine. Lessing gave one grain and a half three or four times, in chronic pulmonary catarrh.

From these quotations it is evident that it was impossible from the manner of administering this remedy, in combination with others, frequently of the same class, to decide on its effects; and further, that the dose seldom exceeded one grain, and only in exceptional cases reached as high as six or eight grains in the course of a day. It is, moreover, to be kept in mind, that such are the doses administered to adults.

In looking over the literature of diseases of children, we find as many negative as positive facts; that is to say, there are as many writers, who do not even mention the name of this article, as there are who recommend it highly. In the oldest pædiatric literature, even in Nils Rosen von Rosenstein's work, the oxysulphuret of antimony is not mentioned. Jahn (1803) says, it has been recommended by some in hooping cough.

Henke gave half a grain twice a day, together with half a grain of powdered herb of Belladonna, in hooping cough. Tourtual gave a quarter of a grain, with three grains of sulphur. three times a day, in pseudo-croup and the second stage of inflammation of the trachea. Dornblüth used a quarter of a grain every three hours, in pneumonia, to a child of one year of age. Wendt gave the same quantity, in the like disease, four times a day, to children of from three to four years of age. Hinze gave half a grain every two hours, with oxide of zinc and musk in hooping cough. Meikisch, who wrote his "Contributions to the Knowledge of the Infantile Organism" at about the same time (1825), neither recommends nor mentions it. Wenzel (1829) prescribed it in pneumonia, to a child of one year of age, a third of a grain to be taken three times a day; to a child of two years of age, either half a grain four times a day, or a quarter of a grain twice a day, or a sixth of a grain to be taken every hour; in measles, to a child of two years of age six doses of half a grain each, every two hours; to a child, one year old, twelve doses, of an eighth of a grain each, to be taken four times a day. Rau (1832) considers it to be a powerful expectorant, in a dose of a sixth or a quarter of a grain, in infantile pneumonia, after the height of inflammation and fever is over, and where the accumulation of phlegm in the bronchi forbids free breathing. Meissner (1832) mentions it as an expectorant, but does not appear to expect much of its administration. After this period, the oxysulphuret of antimony is seldom mentioned, and never so strongly recommended as before. It is true, that Cruse (1839) in his work on infantile bronchitis, speaks of it as an expectorant, but he frankly states that he prefers the anisated liquor of hartshorn.

Fuchs, in his monograph on infantile bronchitis (1849), merely mentions its name, but as early as 1837, Seifert did not think proper to name it among his medicinal agents, in his monograph on the bronchio-pneumonia of new-born infants and nurslings. Moreover, there is perhaps no manual on infantile diseases, of the last twenty years or more, which takes the least notice of it, whereby sufficient proof is given, that the recommendations of some of the earlier writers were not confirmed by the experience of their successors. In the manuals of the following authors: Valleix, Barrier, Underwood, Coley, Evanson and Maunsell, Stewart, Eberle, Legendre, Dewees, Hennig, Meigs, Condie, Churchill, Bednar, West, Rilliet and Barthez, Bouchut and Tanner, not the slightest mention is made of the effect of the oxysulphuret of antimony as an expectorant.

In the works of some of the latest writers we find similar remarks. Anton, in his collection of prescriptions, prescribes in pneumonia of children of from eight to twelve years of age, a quarter or one-half of a grain. Joseph Schneller, in his "Materia Medica applied to the Diseases of the Infantile Age" (1857), while saying, that it is administered in long continued catarrh, bronchial blennorrhœa, in croup, when the more dangerous symptoms are disappearing, in hooping cough, as a diaphoretic and expectorant, speaks of doses of an eighth or a quarter of a grain each, to be taken three or four times a day. The pharmaceutical writers of the present day offer similar remarks: Schroff, of Vienna, speaks of several daily doses of from a quarter of a grain to a grain each; Schuchardt, of Gottingen, has from a quarter of a grain to two grains, and allows even five grains in exceptional cases. Oesterlen, of Heidelberg, whose doses are believed in Germany to be generally very high, speaks of doses of from one to four grains, to be given several times a day. Sobernheim recommends a quarter or one-half of a grain, sometimes even one or two grains, to be administered two or four times a day. While, then, authors on pharmaceutics and therapeutics deem it their duty to register anything that has been said on any pharmaceutical object, pathologists of the present day, especially such of the last year, as Wunderlich, Leubuscher, Niemeyer, either entirely overlook this antimonial remedy, or have very little indeed to say in its favor. Finally, from "Thomson's Conspectus of the British Pharmacopœias," seventeenth edition, 1852, we copy the following notes on the oxysulphuret of antimony: "Operation: emetic, diaphoretic, cathartic, according to the extent of the dose; alterative, used now only for forming Plummer's pill. Use: for chronic rheumatism and obstinate eruptions. Seldom ordered. Dose: gr. i. to iv. twice or thrice a day, in a pill." The "Dispensatory of the United States," tenth edition, p. 881, pronounces the very same opinion: "The precipitated sulphuret of antimony is alterative, diaphoretic, and emetic. It is, however, an uncertain medicine, as well from the want of uniformity in its composition, as from its liability to vary in its action with the state of the stomach. It is seldom given alone, but generally in combination with calomel and guaiacum, in the form of Plummer's pill, as an alterative in secondary syphilis and cutaneous eruptions, or conjoined with henbane or hemlock in chronic rheumatism. During its use the patient should abstain from acidulous drinks. Its dose as an alterative is from one to two grains twice a day, in the form of a pill; as an emetic, from five grains to a scruple."

From the facts thus selected from the authors of more than the last half century, it becomes evident that there is a great variety of opinions as to the operation of the oxysulphuret of antimony. While believed to be, at a certain period, a highly valuable remedy in different morbid conditions of the organism, or inflammations of the respiratory organs, scrofula, rheumatism, arthritis, blennorrhœa, diseases of the lymphatic glands, of the skin, and of the pulmonary nerves, it has been again considered to be so valueless as not to attract the least attention from the medical writers of the last twenty years. We believe the reason may be found in the fact we insisted upon above, that the majority of preparations have been uncertain, because of their being badly made; and in the further fact, that medical practitioners followed more the theoretical impression of the caution required by antimonial medicaments in general, than their own careful observations on the mode and strength of the operation of the precipitated oxysulphuret.

Thus, what we are going to prove next is, that the doses given have been incompetent and insufficient for any considerable result; and that what is put down as the highest dose to be administered, is scarcely proper to begin with even in the slightest affections. It is well understood by our readers, that the larger doses of one grain, etc., as above mentioned, are to be taken as the quantity allowed for adults. If these doses were to be reduced to the proportion necessary for infantile diseases, we shall, after having reported our practice and the results of our doses, appear more justified in saying that the difference of opinion and the want of confidence is entirely due to the insufficiency of the doses administered.

Before making some general remarks on the indications, we annex the subjoined list of cases taken from the journal of the children's department of "the German Dispensary of the city of New York," which, for the use of our readers, has the number on the journal, the sex and age of the patient, the diagnosis, and the doses of the oxysulphuret of antimony. We shall add some observations taken from our private practice:

No. of Journal.	Sex.	Age.		Disease.	Dose of oxysulph. of antim.	Continued	Combined with
		Yr.	Mo.				
7	F.	2		Pneumonia, left, inf.	1½ gr. every 2 hours.	4 days.	
9	M.		3	" " sup.	1 gr. 4 times a day.	12 "	
158	F.		9	" bilat. sup.	1 gr. every 2 hours.		
216	F.		6	Hooping cough, cat.	¾ gr. 4 times a day.		
265	M.	5		" "	1½ gr. "		Extr. bellad. ¼ gr.
281	F.	4		" "	" "		" "
290	M.	1	6	" "	1½ gr. every 2 hours.		
					3 gr. 4 times a day.		" "
300	F.		9	" pneumo'a.	2 gr. "		
311	F.		3	Pneumonia, left, inf. after measles.	2½ gr. "		Sulph. chin. ½ gr.
313	F.		3	Hooping cough, cat.	1 gr. "		Extr. bellad. ¼ gr.
326	M.	2	6	Pneumonia.	2½ gr. "		Sulph. chin. ½ gr.
355	M.		7	" left, sup.	2 gr. "		
					1 gr. every 3 hours.		
370	M.	1	5	Bronch. cat.	1 gr. "		
397	M.		3	" "	¼ gr. every 2 hours.	4 days.	
410	F.		2	Hooping cough, cat.	2 gr. 3 times a day.		Extr. hellad. ⅓ gr.
457	M.	1	8	Bronch. cat.	1⅔ gr. every 2 hours.	2 "	
486	M.		7	Hooping cough, cat.	1 gr. 4 times a day.	12 "	Extr. hellad. ½ gr.
541	F.	1	2	Bronch. and gastr. cat.	1 gr. every 3 hours.	2 "	Sulph. chin. ½ gr.
610	M.	2	2	Bronch. cat., emphys.	2½ gr. 3 times a day.	6 "	
628	M.	4	6	Hooping cough, cat.	1½ gr. "	8 "	Extr. hellad. ⅓ gr.
691	F.		6	" "	1 gr. 4 times a day.	6 "	" ¼ gr.
709	F.	1	7	Bronch. cat.	1 gr. every 2 hours.	12 "	
826	F.		7	"	1 gr. 4 times a day.		
981	M.		5	Hooping cough, cat.	¾ gr. "		Extr. hellad. ⅙ gr.
1000	M.	1	1	Pneumonia, left, inf.	1 gr. every 3 hours.		
1134	M.		7	Pneumonia, left, sup.	1 gr. every 2 hours.	4 "	
1144	M.	2		Ditto, Hooping cough.	1 gr. "	2 "	
					2 gr. "	2 "	
					3 gr. 4 times a day.	8 "	Extr. bellad. ⅓ gr.
1160	M.	2		Bronchopneumonia.	2 gr. every 2 hours.	6 "	
1168	M.	1	6	Pneumo'a, h. cough.	2 gr. "	4 "	
1172	M.	1	6	" right, middle.	2 gr. "	6 "	
1176	F.		3	Hoop. cough, br. cat.	1 gr. 3 times a day.		Extr. hellad. ½ gr.
1261	M.	1	1	Pneu. right, sup., tub.	1½ gr. every 2 hours.	4 "	Sulph. chin. ¼ gr.
1370	F.		2	Pneumonia, left.	1 gr. "		
1373	M.	1	6	Pneumonia, right, inf.	2 gr. "		

Of this number two patients died; one of pneumonia combined with measles, the other of quite recent pneumonia of the inferior lobe of the left lung, for which she was not treated, after her hooping cough subsided. All the others recovered.

The general result of the dispensary was also obtained in our private practice. We remember a great number of patients of a year and under, who took a grain of the oxysulphuret of antimony every two hours, even every hour, without vomiting more than once or twice, some without vomiting at all. The same occurred with children of two or three years of age, who took doses of two grains, four, and even six or eight times a day, without showing any other result than the desired one. We recollect the case of a boy of two years four months of age, in the basement of No. 158 Leonard street, who while suffering from a severe double pleuro-pneumonia, after having for a while taken somewhat smaller doses, took for four days, either a dose of two and a half grains every two hours, or of five grains every hour; he did not vomit more than once, and that easily, in twenty-four hours, and did not show more than a trace of the doses in the passages, of which he had one daily, before the end of the second day. The pathological alteration of the lungs and pleura was such, that the prognosis was unfavorable from the beginning; but the purpose of the administration of large doses of the remedy was readily accomplished as the patient, in consequence of his easy and copious expectoration, avoided the death of suffocation.

A boy of six months of age has been under our care for the last week, who has taken, every other hour, a dose of a grain and a half, while in the second stage of pneumonia of the left lung. It is true that the infant vomited after the first four doses, but he did not feel the worse for it; only on the third day of his taking the remedy it would be found in the passages, which were not particularly changed from their general normal appearance. When, indeed, children are vomiting after the first, or one of the first, doses of the medicament, we do not see any harm in it; the bronchial secretions cannot be removed in a quicker and generally safer manner.

We omit giving further special reports on individual cases; the diseases we refer to are so common as to be the daily anxiety of every practitioner; and every one will be capable of proving the accuracy of our observations, and the truth of our remarks very speedily. After the favorable results above reported, by means of large doses of the oxysulphuret of antimony, we trust the profession will resort to larger doses, and thus again introduce into their practice a long-forgotten remedy.

But it cannot be too strenuously urged, that the indications for the use of this medicine in inflammatory diseases of the infantile respiratory organs, ought not to be overlooked. Whoever contends against the fever of the first onset of pneumonia with the oxysulphuret, will feel sadly disappointed as to the final result. Whoever treats acute bronchitis in the same manner, will soon become aware of his mistake. Its operation is only to liquefy the secretion of the mucous membranes of the respiratory organs.

We think it may be well compared to the preparations of mercury; in the same manner as these effect the liquefaction of plastic exudations and alter the plastic quality of the blood, the oxysulphuret of antimony effects the liquefaction of the secretions of the mucous membranes of the respiratory organs. How this is done it is impossible to determine. At all events some effect on the respiratory nerves is also effected, and possibly much of the result is the consequence of their altered functions. How far, besides, the mucous membranes of other systems are subject to the operation of the medicine, our experience does not fully enable us to say.

It has been used, and is used by us, in inflammations of the larynx, trachea, bronchi, and lungs. After the inflammatory fever is removed, and the disease has reached its highest development, it ought to be given alone or in combination with other agents, in full doses. Not before this stage of the disease can this effect be obtained. We have generally been fortunate enough to see a speedy recovery follow its administration. We need not add, that it renders the best services in common bronchial catarrh, where full and speedy expectoration is wanted. Such were the indications for the use of the oxysulphuret of antimony at the time of its cautious administration long before it appeared to be almost entirely forgotten, particularly in the United States and Great Britain. But the want of knowledge as to its proper use, seems to have impaired the success due to it when used right.

There is but one writer, Neumann (1840), who went as far as to prescribe to adult patients, doses of six or seven grains without producing vomiting, and to confess that he did not see an objection to giving, if necessary, a dose of twenty grains. To this remark, and to the fact, that this remedy has been recommended and administered by us also, in a few large doses daily, in pulmonary emphysema, and, finally, to a remark in Rilliet and Barthez's Manual (vol. iii. chest, chap. viii. art. ix.) on the use of from five-sixths of a grain to thirteen grains, in some cases, of the mineral kermes, we owe the first idea of introducing into our practice the oxysulphuret. We had abandoned it years ago, tired and disappointed with the entire want of success in the use of small doses taught by the manuals on materia medica.

We are aware of the objection to large doses of this remedy, that it cannot but sometimes produce excessive vomiting. Such a case might occur, but could easily be remedied by diminishing the dose; there is no remedy against which individual idiosyncrasies will not prove rebellious, although given in small doses. Generally, vomiting will not prove of any importance; at least we have been taught so by experience. Furthermore, it is to be kept in mind that there are influences which may be avoided by careful management; it is well known, for instance, that nauseating remedies, although in small quantities, may operate as emetics; thus, a little tartar emetic will, when dissolved in a large quantity of water, prove to operate as an emetic and purgative. On this principle the oxysulphuret of antimony, too, could have a nauseating effect, when brought into further contact with the whole surface of the mucous membrane of the stomach; it is even possible, in our opinion, to produce diarrhœa by diluting the remedy by copious drinking of sugar water or similar things. All this will have to be avoided.

We are less afraid of diarrhœa being produced by spontaneous chemical decomposition, especially by formation of the oxide of antimony, for acids and alkalies can be avoided, and kept from coming into contact with the oxysulphuret, and diet may always be regulated according to circumstances. Further, we scarcely recollect a case where diarrhœa of any importance followed upon the administration of our medicament; at all events, there was none, the cause of which we could look for in the antimony. Third, our preparation, when found in the evacuations of the bowels, is not the result of decomposition.

As to the fact, that the oxysulphuret of antimony is found in the passages a day or two, or three, after commencing its administration, we have had the objection made to our large doses, that they are worthless because of their leaving the organism without exercising any influence. Now we have often experienced the fact, that no difference can be found as to the time (usually the second or third day) when the medicament is visible in the fæces, whether it has been given in large or small doses. Besides, we do not know exactly what the mode of its operation is; perhaps it is not necessary at all to have it entirely dissolved and taken into the system in order to see its full power developed; and besides, we know very well that other remedies appear in the fæces very soon after their having been swallowed, and, like the iron in its several forms and combinations, lose nothing of their medicinal effect.

The last objection to the oxysulphuret of antimony has been, that it belongs to the class of nauseating remedies, and will, undoubtedly, when taken any length of time, affect the appetite of the patients, and thereby injure their strength. Now, we desire our readers to remember what the indications are which require its administration. An inflammatory fever has just been removed by an antiphlogistic treatment; the assimilating functions are almost entirely gone; there is still a fever, and the necessity, at the same time, of furthering the secretion of the mucous membrane and removing exudation. This is the period for the employment of this drug. The appetite cannot be affected, for there is none; if there was, in spite of fever and inflammation, it would be better impaired, in order to keep the digestive functions as inactive as possible. At a later period of the disease, or where danger arises from anæmia, it is certainly necessary to think of the stimulation of appetite, digestion, and assimilation. Then the oxysulphuret of antimony may be combined with iron, with quinine, with rhubarb, or nux vomica, etc., each of which has its own indication. One remedy cannot answer all indications at this period.

We have a single additional remark to make. Our therapeutical observations have generally taught us, that wherever a remedy is really and fully indicated, it is tolerated in large doses. Thus, we have the firm conviction that the large doses of the oxysulphuret of antimony, recommended above, will surely be adopted in general practice, as has been the case with the tartar emetic since the times of Peschier and Rasori, and with the opium since the ingenious and important discoveries of Clark.

50 Amity Street.

Art. VII.—*A Case of Perforating-Ulcer of the Stomach.* By Adrian T. Woodward, M.D., Professor of Obstetrics and Diseases of Females, in Castleton Medical College, Vt.

As not a little attention on the part of the medical profession has been directed to Ulceration of the Stomach, and not a little interest felt in research upon the subject, I am disposed to send you the following report of the history of a case which recently came under my observation.

I was called, Sept. 26th, 1858, to visit Miss L., aged 19; full habit, of healthy American parents. I found her suffering acute pain in the pelvic region, with considerable tenderness, tongue slightly coated, natural heat of the surface, and only a moderate degree of thirst. I learned from her, that four weeks previous she had been overtaken by the catamenial climacteric in periodical regularity; that after flowing one day, the discharge suddenly ceased, as she supposed from an imprudent exposure, and since that time she had not felt well, but was unable to locate the trouble; there was only a general feeling of uneasiness and heaviness unaccompanied by pain. On the previous day (25th Sept.), menstruation again returned, but from some unknown cause had suddenly ceased as before. The only local phenomenon manifested between the two catamenial periods was nausea and vomiting, which had made its appearance one week previous to the last attempt at menstruation. I have since been told by those who saw her at that time that the distress accompanying the vomiting and the retching were very painful to observe. When on the 25th she commenced menstruating, the vomiting, in a measure, though not entirely, subsided, to be renewed again as was supposed, by the stoppage of the menses. No great importance was attached by the patient herself or the family to the vomiting at the time, and from the above history, and from her general condition, I prescribed for what seemed acute suppressio mensium. Sulph morp. gr. ¼ to be repeated every second hour until relief from the pain was obtained. Four comp. cath. pills and a warm hip bath to be followed by sinapisms to the thighs. On taking my departure I requested the parents to send for me in the morning should there be no change for the better. I heard nothing from her until 6 P.M., the following day when I was summoned in great haste as she was evidently much worse. On arriving I found that the morphine had not been repeated, as she had grown easier in a short time after the exhibition of the first dose, and had so remained up to 3 P.M., when the pain in the abdomen returned in an aggravated form, and the vomiting, which had continued at intervals during the day, increased. The family had supposed this owing to the constipated condition of the bowels as the cathartic had not operated, and until the return of the distress in the abdomen and its consequent aggravation had not been alarmed by it. Upon seeing the patient, I found her pulseless, with a cold, clammy sweat bathing the entire surface, and humid and catching respiration, with insatiable thirst, and a constant desire to urinate. As the abdomen was very tender, I was unable to satisfy myself as to the distension of the bladder; but feeling it best to err on the side of safety, I introduced a female catheter, whereupon I found the bladder empty. The pain which the patient located in the lower part of the abdomen was most exquisite. I immediately administered diffusible stimulants, with ¼ gr. sulph. morphine, and endeavored by every means in my power to rally her, but to no purpose; she died in an hour after my arrival.

Autopsy.—Fourteen hours after death. No unusual appearance upon the surface. *Rigor mortis* great. On opening the abdomen, a fluid resembling in color and odor the contents of the stomach and small intestines was found floating the viscera. After sponging it out, search was made for a perforation, which was found to exist in the anterior wall of the stomach, near the pyloric orifice. A circular opening three-eighths of an inch in diameter pierced every coat of the stomach, which, for a space of three inches in extent around the aperture, was increased to a thickness of at least five eighths of an inch. No other portion of the organ showed any marks of inflammation or ulceration. The peritoneal covering of the small intestines was considerably injected with blood, and the ovaries and mucous lining of the uterus were in a state of congestion.

It is worthy of remark that the subjects of nearly all the reported cases of this disease have been young females of a healthy habit, plump, and in good condition.

I cannot refrain from adding in this connection, although it has no relation whatever to the subject of this article, that on this subject the ruptured Graafian follicle was perfectly demonstrable, showing, as did another case in which I had the rare opportunity to make a post-mortem examination upon a female who died upon the first day of the *show*, that in *some* cases, and it is fair to infer, *usually*, the Graafian vesicle is ruptured at an early day of the catamenial climacteric.

ART. VIII.—*Report of the Proceedings of the Medical Societies and the Practice of Hospitals of New York.*

BELLEVUE HOSPITAL—CLINICAL INSTRUCTION.

THE annual course of the winter session of Clinical instruction at this great Charity of New York, was opened on the 18th of October, 1858, when the introductory lecture to the several courses of clinical illustration and practice was delivered by JOHN W. FRANCIS, M.D., LL.D., the President of the Medical Board, in the new and spacious operating theatre recently finished. The discourse was delivered to a crowded assembly of medical men and students of medicine, many from the remotest parts of the Union, and was received with deserved approbation. It embraced among much matter of a collateral character, a history of the origin and progress of anatomical preparations, and illustrations of the estimation in which the art was held and its continued importance from the time of Swammerdam and Ruysch, of Holland, down to the latest period of science. We extract from a portion of the discourse a brief selection of occurrences, including the times of the Hunters, down to the transactions of a like nature in New York, and in some of the other institutions of the republic. We have learned that this address, at the request of the students, is about to appear entire from the press :

Pregnant with glory as are the annals of British medicine and surgery, and enduring as must be our gratitude for the advancement our profession is admitted to have received from English science, there are two names that stand above all others of that empire to whom must be awarded a special preëminence for their labors. I allude to William and John Hunter. As anatomical and physiological pursuits are now conducted, we are compelled to revert to these great men as the most successful explorers of the human structure during the march of modern improvement. Their lives have been amply written, and at a future time you may enrich your memories by a perusal of their achievements. Notwithstanding the advances recently made in the same subjects of inquiry which once summoned their close attention for years, their writings are still perused as every-day books. Rigid dissection and minute anatomy are the grounds upon which their merits rest; and seldom, indeed, in this our own time, does much controversy arise out of their revelations. While living, they met with opposition enough, but the arguments, *pro* and *con*, have settled in the conviction that an almost Baconian accuracy characterizes their deductions. This is especially the case with the writings of William, the elder brother. His 'Anatomy of the Gravid Uterus' is the rock upon which his fame rests. No subsequent writer has attempted to rival it, and though contentions have sprung up as to his account of the membrana decidua et reflexa, I am satisfied by ocular proofs of his preparations, that he had the best reasons for his description.

His minute and elaborate work was the result of twenty-five years' labor. I cannot speak of his other writings on this occasion. He was every inch of him a philosopher. Of John Hunter, his writings announce the originality of his mind: he was a practical surgeon; as a deep physiologist and pathologist he did more than even his renowned brother, and his name is consecrated in the history of medical transactions. But I must not usurp the duties of your teachers. I must leave to Dr. Mott, and to Dr. Van Buren; to Dr. Dalton, and Dr. Metcalfe, and Dr. Clark, and your other instructors, the task of specifying his merits. With little learning, but an untrammelled intellect, John Hunter discovered, with wonderful acuteness, unsuspected truths, and his reflections were marked by a rationality which generally led to the strongest convictions. What raptures must have filled his soul when he saw that his discoveries had secured a deathless fame. How he must have revelled in the luxury of genius. He was poor, but were not his possessions greater than those of emperor or king, and could he not, in defiance of worldly pomp, exclaim: "My mind to me a kingdom is?" He had spent more than ninety thousand guineas in anatomical investigations. Garthshore one day entering his museum, and finding him busily engaged, exclaimed: "Oh, John, you are always at work." "I am," replied Hunter; "and when I am dead, you will not soon meet with another John Hunter." His copious volumes are full of practical import. He was a mighty reformer in surgical doctrines, and in physiological and pathological principles. He was of no school. He was nature's interpreter. I can hardly say in how many branches of our art he was an innovator and a discoverer, as well in comparative anatomy as in vegetable physiology. He profoundly investigated the nature of life and the origin of disease. He passed almost an entire ten years, at one period, in the dissecting-room, sometimes aided by Cheselden, sometimes by Percival Pott. Abernethy delighted to recount stories of his peculiarities, to which I have repeatedly listened; of his provoked mind, from a want of command of language, correctly to set down his thoughts ; and of his determination to allow himself but four hours sleep at night, while after his dinner he generally took a siesta of some two hours, though the books, said Abernethy, affirm only one ; and this plan was adopted in conformity to his physiological laws, that digestion was a great function, and demanded repose.

He who would know how liberally the Hunters appropriated their hard earnings of professional life, and the incredible amount of good they accomplished for the advancement of medical knowledge, will profit by their biographies, and reverence both the heads and the hearts of these illustrious men. Like the Bernoulli in mathematics, they have earned an immortality of fame. Their claims to the regard of posterity are unbounded. From humble life and extreme obscurity, they were by individual effort raised to the highest eminence in the scientific world.

Their reputations, however, do not depend upon biographical facts, nor even on their precious writings; these, indeed, are accessible to all, and all may grow wiser by them. They have left the monuments of their renown, erected by their inflexible perseverance, in the great collections which they formed of anatomical preparations, and as these are open to the inspection of the world, the Hunterian Museum in Glasgow and that in London will speak in louder accents in behalf of their founders than the eulogy of the warmest friend, or the most erudite mind.

Sir Everard Home has published quartos descriptive of the Hunterian collections. As these museums are objects of inquiry to all travellers, I, of course, could not forego the pleasure of a sight of them ; they, moreover, fell within the scope of my professional business. To examine them with profitable results, would have demanded months, nay, years. Even a partial survey strikes the beholder with wonder at their magnitude ; and their exquisite beauty and perfection almost discredit the idea that they are the work of mortal hands. Wherever there was life, Hunter sought out its organization, the better to unfold its phenomena. He stands alone. Were I to estimate him by his genius and his studies, I would not hesitate to class him among astute theologians, so sublime were his pursuits, to vindicate the ways of God to man. "To prove an intelligent Creator," says Archdeacon Paley, "I take my stand in human anatomy."

From the monad, or primary molecule, to the perfect formation of the mature being, all is illustrated; the most minute specimens of sound and morbid anatomy are brought to view, and every article arranged in its relation with the laws of organic life and development. Here, I repeat, the man of research will find every species of animated being, or link in organization, from the humblest vegetable to organic man. What a revelation of created wisdom is thus unfolded ! All—all the work of two individuals. What devotion must have inspired John Hunter—what seclusion from the world and its gaieties must have reigned within his mighty bosom, so to absent him from society, in order to seize time for his vast work. I again repeat, the soul is penetrated at the sublime manifestations which weigh upon the heart by an inspection of these collections.

There are those who have compared the labors of John Hunter to the Principia of Newton, and of the number who have uttered this language is the late Joseph Adams ; but this is going too far. There are others, composed of the baser materials of our natures, who with malign intent, have denied his services, and dwelt upon his unlettered cultivation; precisely after the manner that James Watt was pronounced to have done nothing for the perfection of the steam-engine, or Fulton to possess no merits in steam navigation. I will not insult you by recording the names of such miserable detractors; the poverty of my diction permits me not to characterize them better. Let Stygian darkness ever cover them, even if they escape the vengeance of heaven. It was, doubtless, too much for Hunter's miserable opponents to endure, when the world rang with John Hunter's praises : as they could not secure to themselves the penalty of celebrity, nothing was left them but to imitate the owl who, we are told, declares the eagle blind. Hunter, though of an irritable temperament, with many struggles, endured all, conscious of his deserts. Tell me if any of you have, at any time, read either in fable or in history, that the elephant ever complained of the too great size of other animals.

The history of all art, the history of every science, yields this instructive truth, that great discoveries are, after all, the issue of preceding investigations; it is step by step that our art, in many hands, and by the workings of many minds, has arrived at its present exalted state. Read Brucker or read Whewell, you will find this fact abundantly verified in the history of philosophy : a partial exception may perhaps be found with Sir Isaac Newton on optics; and in the case of John Hunter it would seem that by an intuitive sagacity he at once seized upon essential principles not dwelt upon before, and disclosed to our comprehension new laws of organic life and new curative means of relief. When Dr. Pearson led me to the apartment of St. George's Hospital, and pointed out the place where Hunter fell dead, with a disease of the heart, I felt as though I stood on a consecrated spot. Don't you think, after all, that his death was noble ; he died vindicating the rights of a student. He possessed an impetuous nature, but he had the tenderness of genius.

The world has produced but one Aristotle, one Bacon, one Newton, one Franklin, one Washington, one John Hunter, men who have individually demonstrated what special acquisitions in assigned services may accomplish. Let us at all times, with charity, tolerate diversity of opinion, but let us unite in one sentiment, that John Hunter stamped the impress of original powers on the noble art of healing, and enlarged the sphere of its benefits. We may further affirm, that the acute mental perceptions of John Hunter, by the appropriation of his vast gifts, have given us, in his museum, a book of wisdom, which, like the inspired volume, may be deemed an emanation of profoundest thought, and which has taught man how fearful and wonderfully he is made; that only a Divine Architect could have been his creator ; and while it admonishes us that the wisest provision is made for his proper continuance, tells us his economy is neither to be molested by the presumptuous, nor tampered with by the ignorant unacquainted with its mysterious harmony.

These few reflections on these great museums bring forcibly to my recollection the gratification I experienced, through the courtesy of the anatomical professor, from an examination of the collection of preparations of sound and morbid parts, in the College at Dublin, in 1816, brought together chiefly through the zeal and talents of Macartney. Next, I think, to those contained in the museums of the Hunters, they exhibited the nearest displays towards perfection in artistic manipulation and soundness of preservation. Macartney was long an efficient aid in St. Bartholomew's Hospital, with Abernethy, and the translator of Cuvier's Anatomy of the Brain.

Whether this address, prolonged beyond the limits of my first intentions, has inspired you with the importance of anatomy, and in the right means of acquiring a knowledge of it, by dissection, by the use of the knife, the forceps, and your own faculties of observation, is the secret of your own bosoms. I might go much further to point out the value of dexterous manipulation in the dissecting-room, preparatory to the skillful display of chirurgical tact in the sick chamber, were I to adduce other illustrations of the exalted condition of surgical anatomy and pathology, as it is recognized at the present day, and cultivated in Europe, and in our own country. But the question is no longer debatable. You have, very lately, a triumphant specimen of the results of labor and talent in that field in the works of Dr. Gross, now a distinguished professor in Philadelphia.

Leaving then the subject, treated indeed but very imperfectly, I shall close with a few scattered observations on the history of anatomical preparations in the United States; so far only, however, as to impress you with the fact that something has been accomplished among us, and that the ardor which now presses forward the pursuit must effect results prolific of lasting benefit.

In a recent lecture I gave you some particulars derived from our early Dutch records, of a post-mortem examination of the body of Sloughter, the English governor of New York. This occurred as early as in 1691. It is the first autopsic examination that ever occurred in the American colonies. The governor, it was affirmed, had died by poison, but no proofs of that nature could be derived from the doctors' post-mortem testimony. The fact is, the governor died from a debauch ; and it doubtless furnished the Dutch faculty with a gratifying spectacle to exercise their functions over a worthless ruler, whose moral and political life was at variance with the ethics of the good old burgomasters, and whose inebriation proved to be the death of the patriotic Leisler.

The earliest anatomical dissection for imparting medical knowledge was performed also in this city, on the body of a convicted felon, Hermanus Carrol, by Doctors John Bard and Peter Middleton, in 1750. Only two years after there arrived from Scotland, William Hunter, at Rhode Island. He was a near relative of Wm. and John Hunter. The emigrant Hunter was now only twenty-three years old ; but he had studied with the elder Monro and at Leyden. He gave lectures at Newport in the years 1754, '5, and '6. They were reported to have been of a high order of instruction : he was long a prominent practitioner and a bold surgeon : he died in 1777. Hunter's lectures were, doubtless, the first regular course of practical anatomy founded on dissections taught in America. We have no means of knowing what might have been the contents of his museum, as his library and other effects were dispersed by the revolutionary struggle.

There is a name in the English history of anatomical preparations most conspicuous and familiar to all who are acquainted with the biographies of Monro secundus, William Hunter, Morgagni, Mead and others. I allude to Dr. Frank Nichol. He was born in London, had visited the schools of France and Italy, was graduated at Oxford, and finally became one of the physicians of the king. It was during the middle of the eighteenth century that he signalized himself by making fine and highly finished preparations, which attracted the attention of the faculty. I mention him specially because a portion, I cannot tell to what extent, of his great collection of injections was given by his son, a member of the British parliament, to Ward Nicholas Boylston, of Boston, for Harvard University ; but the year is not specified. As Nichol died in 1778, it must have been nearly at the close of the century. I have often heard Samuel Bard and Wright Post talk of Nichol's talents in that vocation.

A collection of preparations illustrative of some points in sound and morbid anatomy, found a location in Pennsylvania for the Philadelphia school about the same time, the gift of the late Dr. A. Chovet. This incipient movement to establish a museum of anatomical preparations in the great medical school of Philadelphia, we are told, has been followed by many distinguished laborers in the honorable work within late years ; and, if report deceive us not, the enterprise of Dr. Goddard, and the capacity and zeal of that remarkable man, Dr. Leidy, have already given exhibitions of skill in that peculiar line of scientific and artistic power, which held out to the profession lasting results of highest value to anatomical knowledge.

An effort of no ordinary character to create an anatomical museum for the College of New York, was made by the late Dr. Richard Bayley, of this city. What attempts of that nature had been made by his predecessor in the medical school established in 1768, in which Dr. Clossey was appointed professor, we cannot affirm with accuracy. A portion, however, of what had been collected, as well as a portion of the labors of Bayley, were destroyed by the Doctor's Riot, which took place in this city in 1788. The imprudent exposure of a limb by the students excited the populace: the mob broke into the building, the New York Hospital, where they found Bayley's valuable cabinet, which they forthwith heaped into carts, carried out, and triumphantly burned. Little was left, but to that little, the able Dr. Wright Post added specimens of his own skill; the collection was afterwards enlarged by additions imported by Dr. Post, and with awaked zeal, Valentine Mott, Henry W. Onderdonk, John Van Buren, and Guy Carlton Bayley, and others, increased the number. This valuable collection is now in the possession of the College of Physicians and Surgeons of this city, and I must refer you to Professor Willard Parker for more minute details concerning a museum, the result of many minds and many hands.

At the time I first began my medical pupilage, there arrived among us a Dr. Alexander Ramsey, who bore the repute of a distinguished lecturer on anatomy. He had studied with Cruikshank, of London, and was famed for his anatomical preparations. He was chosen to deliver a short course of lectures on anatomy and physiology, in Columbia College. Of his professional knowledge there could be no doubt, but his grotesque person, his unbounded vanity and hauteur, his arrogance and pomp excited the risibles of the whole class. Crooked back, with neck scarcely half an inch in elevation, with a head of huge dimensions, arms lengthened as if of the simia tribe, and person not five feet in height, he seemed created by nature in one of her whimsical moods. He was ever illustrating the harmonies of creation by reference to his own symmetrical development, and to the philosophy taught him by his master, Cruikshank. His career was short among us, but some of the old doctors, still flourishing, must retain a recollection of him. He was called at times the Calaban of science. The ridicule which he provoked while teaching forbade the acquisition of much information by the student. Yet even this Scotch lecturer in some degree aroused attention to anatomy, and as some of his preparations of the absorbents and of the heart were deposited here, he may be said to have promoted our special study. Ramsey had adopted the notion that the bite of the rattlesnake was rendered innoxious by alkalies; an opinion sustained by Ramsey, of South Carolina, our old friend Dr. Mitchill of New York, and by others who adopted the theory of the acidum pingue of De la Boe. Ramsey was adventurous enough to test the theory by an experiment on his own person; he allowed himself to be bitten—contrary to the usual action of that poison, he lingered in suffering, and finally died.

The making of anatomical preparations by the students of our rival medical schools, the occasional importation of specimens of singular value from Europe, the broad and convincing fact that anatomy is the groundwork of a surgical and medical education, have caused the production of many precious displays of the art in these our own days. The great chirurgical achievements of the profession in this city for the last twenty or thirty years, and the value of such evidence of patient study set forth by the teachers of our respective schools, have contributed largely to promote the strongest desire in the student to excel in such labors; and our leading men who assume the proper instructions of students now very generally aim to be furnished with museums more or less ample.

A fact strikingly illustrative of the general desire to found museums of this nature as important adjuvants to the several branches of instruction in the medical art has been most happily evinced by the clinical faculty of our venerable and venerated New York Hospital. I have intimated that at an early day the salutary work was commenced; the public disasters of the times, however, arrested the undertaking, and it is only within the past few years that renewed efforts have been made for its accomplishment. The foundation is now laid; the work is in progress, and it is conceded by all, promises to fulfill the highest expectations. An institution like the New York Hospital cannot fail to furnish materials of most instructive import for the great design; the quotidian laborers of that vast charity must supply specimens profitable to student and professor; her long list of surgical worthies recognized in Cheesman, Post, Buck, Watts, Watson, Parker, Van Buren, Sabine, give confidence that a museum of rare acquisition will ere long add further means to those already secured for elucidating clinical science. I am informed that the immediate conservators of this new collection are Dr. Agnew and Dr. Bayles.

I was not indifferent to this department of knowledge during my twenty years' services as Professor in the College of Physicians and Surgeons and in Rutgers' Medical College. The collection I formed during that period might claim notice from its extent and the nature of the preparations. I had gifts, I purchased, and I prepared. The phenomena of death by lightning, by the drinking of cold water when overheated, cases of death by sun-stroke, instances of poison, yielded specimens of singular value; and as medical witness for nearly seven years in our courts of oyer and terminer, I was compelled in all criminal cases to ground my report on autopsic examinations. In obstetrical knowledge I had much of interest, in illustration of changes and infirmities of the uterine system. This collection is now transferred to Geneva College, an institution of rising importance as a medical school.

From want of time, I shall forbear to dwell upon the collection of preparations illustrative of surgical cases at the hospital at Ward's Island, under the direction of the able surgeon-in-chief, Prof. Carnochan, and the valuable collection of your surgeon, Dr. James R. Wood, of the Bellevue Hospital. The display of anatomical skill and surgical prowess which Dr. Wood's collection presents, aided by Dr. Gouley and others, will in the course of the season enlarge your minds with principles confirmatory of what I have advanced in this lecture, and say more in behalf of the zeal and ability of your teacher than any words can express. Proofs of such skill yield more satisfaction by illustration and example than the most elaborate disquisitions.

I shall close these casual remarks on the history and progress of anatomical preparations with an observation or two on the publication which within a few days past has been generously distributed among you by the venerable Professor Valentine Mott. The devotion and life-long labors of this great practical surgeon and teacher are familiarly known to you all. Nothing but anatomy—surgical, topographical, minute anatomy—could ever have secured the mighty triumphs which enshrine his name. He had received a sound education, and had graduated M.D. at Columbia College in 1806; but he was not satisfied, and repaired to Europe for a residence of nearly three years. He became a pupil of Henry Cline, of Astley Cooper, and of John Abernethy, and from this unadulterated fountain-head he derived that knowledge which has rendered him the contemporary and the legitimate successor of those master minds. As he had wisely repaired abroad for that information which at the beginning of his professional career could only in part be obtained at home, he became enriched with that wisdom which opportunity, labor, study, self-denial and perseverance alone can give. His reputation as a student was announced to his countrymen ere his return among us. In the spring of 1810, he issued a notice of a course of surgical lectures which I, a young student, had the gratification to hear, surrounded by many of the old practitioners of medicine. In the fall of 1810, he enlarged his plan, and the Professorship of Anatomy and Surgery, held by Dr. Wright Post, being divided, to Dr. Mott was assigned Surgery. Now it was that chirurgical science was taught as a distinct course in this country, and the talents and acquirements of this young professor demonstrated that his credentials in behalf of his high promotion justified the ample confidence the trustees of Columbia College had cherished. You will thus see that for nearly half a century Dr. Mott has filled the responsible trust of instructor of chirurgical knowledge in this city. No other individual in the country has been thus employed for so long a period; no other teacher in the land has discharged the great duty with such vast benefits to the public weal. We must look to the army of youths whom he has indoctrinated to understand the merits of his prelections, and to the practical results which have flowed from the demonstrations of science and skill made manifest at his hand. I know that in the several institutions in which he has formed an integrant part he has been estimated at that consideration which superior merit alone attains; that the great art has been amplified by his inventive resources and his indomitable zeal; that the annals of American surgery are fertile of his great improvements; and that his name can never be lost while philosophy honors her votaries, and while humanity cherishes the sympathies of our common nature. I devoutly believe that the preëminent consequence with which surgery is regarded at the present day throughout our wide republic owes much to his unparalleled career as its master, and that its now elevated superstructure rests mainly upon the strong foundation of his professional skill.

With peculiar satisfaction, therefore, I refer you to the surgical museum of preparations, an account of which has been published by Dr. Mott. Its treasures are mainly the fruits of his operative qualifications, illustrated by the ripe labors of fifty years; the whole collection, we are told, is almost altogether composed of specimens made from his individual cases of practice. I shall forbear any enumeration at present. Well may Astley Cooper have exclaimed, when hearing of the bold and intrepid operations of his American rival, "He has performed more of the great operations than any other man living or that ever did live!" That great museum is accessible to every one of you in its appropriate hall in the Medical University of New York.

Gentlemen: I will trespass on your patience no longer. I have appealed to your intellectual nature to acquire science as the legitimate and effective substitute for the overthrow of empiricism; and fortified in that possession, practice, as its associate, will prove the exponent of your knowledge. The struggle of professional life to secure success demands the why and the wherefore, and the mastery of such reasoning is your great reliance. I think I have said sufficient to impress you with the conviction that in repairing here you have come to an institution rich in substantial materials for elucidation; among men who drink from a living spring of active practical knowledge; and such men, according to Locke, are the proper instructors. Here is no stagnant pool: the slough of despond is not visible. It is for you to catch the life and spirit of the place and of its actors. I am done.

ACADEMY OF MEDICINE.

Regular Meeting, Oct. 1858, Dr. S. C. Foster, *V. P.*, *in the Chair.*

PUERPERAL FEVER.

Dr. Barker said:—One year ago this evening I had the honor of offering to the Academy some remarks on the pathology and therapeutics of puerperal fever. Since that time this body has been mainly engaged, during four of its sessions, by the consideration of this important subject. The Academy of Medicine in Paris have also been engrossed in a most zealous discussion of the same subject for many months past, in which M.M. Beau, Caseaux, Cruveilhier, Danyau, Depaul, Dubois, Guérin, Hervez de Chégoin, Trousseau, Velpeau and others have participated, a list of names comprising the first talent of that body. Many articles have also appeared in the French medical press, among which I should mention as specially valuable, those by M. Jaquemier, in the *Gazette Hebdomadaire*, and those by M. Behier, in *L'Union Médicale.*

I may also add, that during the last twelve months, my practical experience in this disease has been greatly enlarged both in hospital and in private practice, as we have not only had the misfortune of encountering it in the Lying-in Wards of Bellevue Hospital, but it has also been unusually rife in this city. From October, 1857, to October, 1858, one hundred and seventy-three deaths from puerperal fever have been reported at the City Inspector's office.

The following table gives the deaths from puerperal fever for each month, and it is interesting to note the parallelism between the deaths from this disease and erysipelas:

Disease.	Oct. 1857	Nov 1857	Dec 1857	Jan. 1858	Feb 1858	Mar 1858	Apr 1858	May 1858	June 1858	July 1858	Aug 1858	Sept 1858
Puerperal Fever,	5	9	14	17	26	21	21	19	13	13	9	6
Erysipelas, . .	4	6	16	13	20	14	23	21	8	13	5	3

In Paris there has certainly been afforded an immense field for studying this disease, as in five years, 1852–56, 644 deaths have occurred, in six of the principal hospitals, from puerperal fever.

I may be pardoned for saying, that I have most carefully and conscientiously read all that has appeared in the French medical journals, and that I have observed, with the most earnest desire for truth, in order that I might correct any error in reasoning or deduction, into which I may have previously fallen.

Before alluding to some points, in regard to the pathology of this affection, I will give a very brief summary of the views of the principal speakers in the French Academy. The discussion originated with M. Guérard, who stated his belief, that so far as the nature of the disease was concerned, we must look for something beyond the mere local lesions, and that its phenomena cannot be explained by means of purulent infection. M. Depaul was the most able advocate of the doctrine of the essentiality of puerperal fever, although instead of the term, puerperal fever, he would prefer calling it puerperal typhus, or puerperal septicæmia. He believes that its essential character consists in a primary alteration in the blood.

In the autopsies which he has made, he has uniformly found the blood in this disease to possess a peculiar fluidity, and to be generally of a violet red color, easily impregnating and coloring the tissues. It often also presents a remarkably oily appearance, and coagulates with difficulty. He quotes from Vogel (in Virchow's Handbuch), who states that lactic acid confers an acidity upon the blood in this disease, and that in some cases carbonate of ammonia, in others the hydrosulphate, is found in it. The fluid loses its aptitude for coagulation as do the globules to redden on the contact of air, and therefore their fitness for the respiratory act. The globules are in part decomposed and dissolved in the serum, giving it a reddish or dirty brown color. Scanzoni asserts that in some cases there is an increase of fibrin, in others a true pyæmia, the constituent elements continuing in their normal proportions, and in others, again, a true putrefactive dissolution or septicæmia. M. Depaul regards the epidemic occurrence of this disease as presumptive proof of its essentiality. He, also, as do several of the other speakers in the French Academy, refers to the fact, that the lesions of the solids are of the most varying character, and that in some fatal cases, these do not exist at all, nothing being appreciable, save alterations in the blood. M. Bean considers puerperal fever as due to local inflammation (most frequently of the peritoneum), united to an inflammatory diathesis depending upon an alteration of the blood—this alteration being an increase of the fibrin, a characteristic of inflammation. In the opinion of M. Piorry, the disease in question is primarily a metritis, phlebitis or peritonitis, septicæmia or pyæmia. M. Caseaux, also believes that it belongs to the phlegmasiæ. Jacquemier, Legroux, and Behier hold similar views. M. Bouillaud considers it due to purulent or putrid infection with an inflammatory element. Velpeau holds that it is a metro-peritonitis, a lymphangitis, or phlebitis (purulent infection), modified by the puerperal state. Trousseau considers it as a phlegmasiæ of a peculiar kind due to a specific cause. Hervez de Chégoin sees in puerperal fever only the results of purulent or putrid infection. Dubois, Depaul, Danyau, and Guérard were the only members of the French Academy who advocated the opinion that puerperal fever is an essential disease, not dependent at all upon local inflammation. M. Cruveilhier considers this disease as both a fever and an inflammation, and expresses his opinion in nearly the same words that Dr. Clark used in this academy six months before. In common also with Dr. Clark, he regards the anatomical lesions as an essential feature in the disease. The following are his conclusions :

1. Puerperal fever is essentially a traumatic fever.
2. The special conditions in which the uterine and the entire organism of the woman who has just been in labor constitutes what may be called puerperal traumatism.
3. The essential anatomical characters of puerperal fever are peritonitis, sub-peritonitis, or purulent lymphangitis. Purulent uterine phlebitis is incomparably more rare than suppurative lymphangitis.
4. It is extremely probable that purulent inflammation of the lymphatic vessels is a cause of the intoxication of the blood in puerperal fever—but this intoxication does not manifest itself by visceral abscesses, as happens in purulent phlebitis.
5. The possibility of purulent infection of the blood by suppurative lymphangitis is not decided in a positive manner.

Now I do not propose to go over the ground of my former remarks, and give my reasons for believing that puerperal fever is an idiopathic fever, which originates from a poisoned state of the blood, and that the quasi inflammatory processes which generally occur in this disease are in reality the results of poison, stirring up its peculiar excitement wherever it finds the proper amount of combined irritation and exhaustion to insure it a nidus, just as the poison of typhus fever awakens its pseudo-inflammations in the intestines, the lungs, and the brain. I will only express my belief parenthetically, that the lesions commonly found in puerperal fever are not due at all to inflammation, but to a pathological process entirely dissimilar and in many respects antagonistic to inflammation. The whole doctrine of inflammation is now in a transition state. Whether the essential characteristics of inflammation be, as Professor Bennett says, an exudation of the normal liquor sanguinis, or in the words of Professor Alison, inflammation is altered nutrition, it seems to me that the lesions found in puerperal fever, indicating destructive disorganization, are of an entirely different character. I should not allude to this point, were it not for a strong conviction that pathological errors in these particulars have led to grave therapeutical errors.

There has been one striking difference between the discussion in the Academy of France and this body, and that is, that in the former, the great majority who have spoken have advocated the doctrine that the phenomena characteristic of puerperal fever are the results of a local phlegmasia, while this view has not found a single advocate here. Holding the views I do, I must regard this as a matter of mutual congratulation. But there is another point, which has not only an important bearing on this question but on general pathology, and is equally interesting to the obstetrician, the surgeon, and the physician, on which I beg leave to dwell for a few moments, and that is the question of purulent or putrid infection, or of pyæmia and of septicæmia.

As regards this subject there is a greater harmony of views between one of our members, who has taken the most prominent part in this discussion, and several of the distinguished speakers in the French Academy. In order that I may do full justice to Dr. Clark, I quote from the *New York Journal of Medicine.* Dr. Clark said "It was his object, on a former occasion, to show that these cases (the cases, which in the belief of Simpson, Gooch, and others, were without lesion of any kind—a simple fever, the poison of which overwhelmed the vital powers,) were no exceptions to the general rule, but that they were really marked by inflammation, like the others, but that the inflammation was one that had escaped detection, that it was an endometritis, and that the inflammation affecting the inner surface of the uterus involved the open or valvular mouths of the uterine veins, and might produce purulent contamination of the system, while no pus was found in the veins themselves after death. The evidence of this was in the inflammatory exudation on the inside of the surface of the uterus; the redness of the uterine structure, penetrating a minute distance from within outward; the symptoms of pyæmia and the discovery of pus in distant organs. To present this idea was the chief object of his former remarks, and to give it distinctness he had referred to and recognized the then commonly described inflammatory lesions, viz. the peritonitis, the purulent phlebitis in the uterine sinuses, and the purulent inflammation of the uterine lymphatics. These, together with endometritis, he had stated were the primary *inflammatory* lesions, and that there were other organs subject to inflammation in a subordinate and secondary degree." In another place he asks, "whether the shortest time" (in which the most malignant form of puerperal fever destroys life), "is not long enough for endometritis to produce fatal contamination of the blood? or, in other words, in what time purulent infection can overwhelm the vital forces?" After giving a condensed summary of the experiments of Sedillot, in injecting laudable and fœtid pus into the veins of dogs, Dr. Clark remarks, "the import of these experiments, and their relation to the disease we are considering, hardly require comment, especially when it is remembered, that the uterine cavity is open to the ready access of air, that when inflammation is recognized on its inner surface, it has often been of a character most likely to furnish a septic agent, healthy or degenerated pus, in an augmented, and consequently accumulated stream. These extracts show the importance with which

Dr. Clark regards purulent contamination and putrid infection in developing the phenomena of puerperal fever. In the French Academy, M. Velpeau endeavored to prove that it results from purulent infection, and Hervez de Chégoin, that it is due to putrid infection. In my former remarks I expressed a doubt, whether pus, the product of simple ordinary inflammation, if absorbed or washed into the circulating blood, will produce the symptoms which we call pyæmia, or whether, in fact, another element besides laudable pus is not essential for the production of these phenomena. As to the effects of putrid pus when mingled with the circulation, there is no doubt, for this has been demonstrated by the experiments of numerous competent observers. But with Dubois I hold, that neither purulent contamination or putrid infection have anything to do with the development of the disease, but that it results from a special poison of the blood, the essence of which is unknown, but the effects of which are very manifest. I believe this to be true of all that class of cases called pyæmia, whether puerperal, traumatic, or idiopathic, and that the extensive and disseminated suppuration are a result of this poison, and not a cause of the disease. The doctrine generally accepted is, that purulent contamination originates in a phlebitis. Now, simple phlebitis alone is not a disease of great severity. It is often met with, wherever there is a traumatic injury or solution of continuity, and it may involve the whole extent of a limb without any great danger, and very rarely has a fatal termination. But sometimes comparatively trivial causes, very slight injuries, are followed by a train of symptoms, the aggregate of which constitute pyæmia, and terminate fatally. Trousseau mentions, that at the Hôpital Clinique in the service of M. Cloquet, four patients died after the following slight operations, one resulting from forced catheterism, another from depressing a cataract, a third from a slight incision for fissure of the anus, and the fourth was a woman who had a slight incision made in the arm for the extraction of a needle.

Puerperal fever was prevailing in the hospital at this time in the service of M. Dubois. Parallel facts have long been observed by surgeons, and I think I may safely refer to the surgical members of this body to confirm the statement, that during the past winter and spring, there has been an unusual tendency to the development of pyæmia. How can such cases as the above be explained by the doctrine of purulent contamination? It is a matter of common observation that large abscesses are absorbed and eliminated without occasioning so-called purulent infection. Dr. Bennett relates a very interesting case of pyæmia, terminating fatally, following acute articular rheumatism. Pus was found in the head, the chest, and the joints. There was no phlebitis. Dr. Watson, in his lectures, relates two cases, in which the autopsic results were strikingly like this, but the constitutional disease was preceeded by otorrhea and abscess in the ear. Pyæmia is a very rare and exceptional result of the traumatic lesions above mentioned, and equally or more so of the diseases referred to, viz., acute articular rheumatism and otorrhea. Neither is it one of the natural terminations of endometritis, uterine phlebitis, or suppurative inflammation of the uterine lymphatics, nor is there any reason for believing that these diseases are liable, when not associated with some other morbific element, to produce fatal contamination of the blood. I cannot, therefore, see what bearing the anatomical structure of the uterine sinuses, on which Dr. Clark laid so much stress in his remarks on the first evening in which he discussed this subject, has upon puerperal fever. Even if those cases described by Gooch, Locock, Simpson, and others, as without lesion, were cases of pyæmia, it does not follow that the pyæmia had its source in the inflammation of the inner surface of the uterus. If the more careful and microscopic examination of modern times had been able to reveal the existence of pus in minute quantities in the uterine sinuses, it does not follow that this pus was the source of the fatal contamination of the blood. It must be remembered that these sinuses constitute a special vascular apparatus, pertaining to the utero-placental circulation, and disappearing when complete involution of the uterus has taken place. Admitting, then, the doctrine of purulent contamination as ordinarily received, pus found in these uterine sinuses must have a very trivial influence on the general system as compared with pus found in the crural, the ovaric, or the iliac veins. Furthermore, microscopic investigations have proved, as Trousseau asserted, and Dr. Clark the other evening admitted, that the absorption of pus is a physical impossibility, the pus globules being larger than the calibre of the capillaries. In the cases of absorption and elimination of the pus of large abscesses before alluded to, the pus corpuscles must first be disintegrated and reduced to a fluid condition. The doctrine of putrid infection is equally untenable. If the retention of a certain quantity of liquid or coagulated blood can produce toxæmia and the effects supposed to be due to this, then a natural, constant, and inoffensive condition would be converted into a permanent and formidable danger, for there is no hemorrhage attending labor which is not followed by putrid infection, as there are always some clots retained and altered in the genital passages. These are briefly my reasons for rejecting the doctrine of purulent contamination as the source of puerperal fever. I do not, however, wish to be understood as asserting that there are no cases of putrid infection which destroy the life of the puerperal woman, for the contrary is my belief. It does sometimes occur from the retention of a portion of the placenta, or of clots which are decomposed within the cavity of the uterus, and in some rare instances from gangrene of the internal surface of the uterus. One case of the latter occurred in my service at Bellevue Hospital. But these cases are quite distinct from puerperal fever, and the differential diagnosis is very easily made out. No one practically familiar with puerperal fever as an epidemic or a sporadic disease, would confound them. In putrid infection the chills are very slight, and recur irregularly and frequently. The tongue is dry and cracked, the teeth and lips are covered with sordes, the countenance exhibits a peculiarly haggard and frightened expression, and hectic fever and colliquative diarrhœa appear at an early period. There is also usually marked subsultus, insomnia, muttering delirium, and abdominal meteorism without pain. The lochial discharge is always extremely offensive. It sometimes is absent, but when this happens, a vaginal examination will give unmistakable proof of the odor of putrescence.

Any or all of the above symptoms may be absent in puerperal fever, and they are never found combined in their entirety. The lochia, for example, is sometimes suppressed suddenly without producing any symptoms, or it may continue unchanged in quality or quantity. It may, to be sure, be very offensive, but this is unattended with the symptoms above enumerated as pertaining to putrid infection.

Puerperal fever, then, is something more and something different from purulent contamination or putrid infection. It is a constitutional disease, primarily acting on the blood. To parody the words of Dr. Meigs, "the constitutional affection leads the train, and brings on the topical lesions after an indispensable preliminary incubation." There are a uniformity and constancy in its symptoms which bear no relation to its local lesions, which are infinitely varied, and in some well authenticated cases no palpable lesions have been found. If they existed, they were too trivial to explain the severity, and intensity, and rapid progress of the constitutional reaction. Pus is found in the veins, the uterine tissue, the lymphatics, the peritoneum, the pleura, the pericardium, the articulations, the muscles, and the cellular, and even the epidemic tissue. M. Charrier describes one epidemic at the Hôpital Lariboisière, in which the first half were characterized by the peritoneal lesion, in the second half lesions of the pleura were the uniform rule, and it was rare that lesions were found of any of the organs specially associated with parturition. Each epidemic has its special characteristic as regards the topical lesions. M. Dubois observed one epidemic, in which all who died were found to have perforation of the intestines. M. Danyau, in another epidemic in 1829, found a constant alteration of the mucous membrane of the large intestine in its whole extent, the lesion being a solution of continuity, as if made by a punch. A careful study of the history of the numerous epidemics which have been described, proves that the variety of local lesions predominating in each is exceedingly great, while there has been sufficient uniformity in the symptoms, as a whole, to characterize it as being different manifestations of the same disease.

I now pass to a consideration of the therapeutics of this disease. This is the cardinal end of the study of all diseases. The discussion in the Academy of France has been utterly fruitless as regards this point, as they have added literally nothing to our knowledge of the proper mode of treating puerperal fever. In this respect I think it is not too much to say, that the discussion in this body contrasts most favorably with that of our foreign namesake. The heroic use of opium and its preparations, in that variety of puerperal fever characterized by the peritoneal lesion, first signalized by Dr. Clark, and the use of the veratrum viride as an arterial sedative, has—and will, I do not hesitate to say—diminished the fatality of this terrible disease by a marked per-centage.

Most of the French speakers distinctly avow their skepticism as to the value of any treatment for the cure of puerperal fever. The exceptions are M. Depaul, who has found his most favorable results from the free use of mercurials; M. Velpeau, who has strong faith in the value of mercurial inunctions; and M. Beau, who is enthusiastic in his encomiums in regard to the value and importance, of the sulphate of quinine in the treatment of this disease.

Now it seems to me that each school of the French—those who have advocated the essentiality of the disease, and those who consider the fever as symptomatic of local inflammation—have equally failed in their therapeutic efforts for obvious reasons. The first have apparently been seeking for some specific in puerperal fever, some antidote for the blood poison, which they would use in an analogous way with the use of the hydrated peroxide of iron in poisoning from arsenic, while the other school are vainly seeking some antiphlogistic course which will overwhelm the inflammatory action. Now there are no specific therapeutics for puerperal fever, any more than there are in yellow fever or in typhus fever. The type of the disease varies to an extraordinary degree in different epidemics. Sporadic cases require very different management from epidemic cases, and the constitution of different individuals attacked, and the tolerance of diseases, differs to a still more extraordinary extent. There is no disease which requires such acute discrimination in the adaptation of means to amend, none which requires a sounder judgment or more incessant watching to combat every assault which exhausts vital power.

On a former occasion, I very briefly alluded to the principal indications in the treatment of this disease. I propose now to examine more in detail the agencies we have the control of in fulfilling these indications. The first indication is to eliminate from the system as much of the morbid poison as possible, by means of depletion and the other evacuants, as purgatives, emetics, diuretics, etc. I said that unfortunately this indication, owing to the peculiar character of this disease, can rarely be fulfilled except to a limited degree. The effects of the poison are developed so rapidly, that the patient will not bear the use of such means, and it is the effects that we are obliged to combat. Within the past year, I have twice resorted to venesection in puerperal fever with most satisfactory results. Both patients were young and plethoric, and the toxæmic influence was strikingly evident in producing great cerebral disturbance. I bled for the same reason that I would bleed similar subjects in uræmic convulsion. I would here incidentally suggest the inquiry whether the type of disease is not again becoming more sthenic or whether there has not been epidemic tendency to cerebral congestion. Within the past twelve months I have bled thirteen pregnant or parturient women, more in the aggregate than I have bled for the seven years before. I may also add that I believe I have had authentic accounts of the death of twenty-one from this cause in the same period of time. I will add nothing to my former remarks in regard to venesection in puerperal fever.

Purgatives I have rarely used in this disease, for I have regarded tympanites as a contra-indication for their use, and in many cases there has been a remarked tendency to diarrhœa, which sometimes has been difficult to control. In some few cases, where there was evident obstruction of the portal circulation, or there was reason to believe that there was intestinal irritation from previous constipation. I have given an active cathartic of calomel, rhubarb and nux vomica. In a latter stage of the disease also, when the patient has been supported by a liberal use of beef tea and alcoholic stimulants for some days, there sometimes comes a period when the digestive apparatus refuses to take up what is put in the stomach, a mercurial laxative has had a most happy effect in unloading the portal system, and relieving the congestion of the capillary circulation of the mucous membrane of the alimentary canal, and the patient at once is able to assimilate what is taken into the stomach.

Emetics were at one period regarded as a specific for puerperal fever, but now they are very rarely used. In three cases, I have decided on their use. The disease was ushered in by recurring chills, nausea and bilious vomiting, with a marked icterode hue of the skin and conjunctiva. The agent selected was the Turpeth mineral in five grain doses, which acts very promptly without producing prostration. But, on the contrary, in these cases they professed to feel less weakness after vomiting, and the symptoms which induced the selection of an emetic were at once relieved.

The second indication mentioned was to control the vital disturbances resulting from reaction. These are principally vascular excitement and nervous irritation. The value of veratrum viride in reducing vascular excitement has in this disease been confirmed by many observers in this city and my own additional experience. It will most surely reduce the quickened pulse of inflammation and irritation. Its use is not incompatible with that of stimulants. Experience has abundantly demonstrated the truth of this apparent paradox. One patient who recovered took, every hour for two days, one ounce of brandy and from three to ten drops of the tinc. veratrum viride, the quantity of the latter being determined by the frequency of the pulse, which was never allowed to rise above 80 per minute, although it sometimes fell down to 40. In another case the veratrum viride did not seem to produce any effect on the pulse, which remained steadily above 130, until the condition of the patient was such that I decided to give brandy. After the first ounce was given, it fell to 108; after the second, to 86. Continuing the brandy, the veratrum viride was suspended for a few hours, and the pulse again rose to 130. After this it was curious to note the fact, that if either agent was suspended the pulse would rapidly increase in frequency, while under the combined influence of the two it was kept below 80 per minute. I have little to add to what has already been said on the use of opium in puerperal fever. In all cases it should be given to the extent of entirely subduing the pain. When the peritoneal lesion predominates, it is the principal agent on which we must rely, and the quantity in which it is to be administered is only to be determined by the effect which it produces.

Third, to combat the local secondary lesions which may be developed.

This indication implies the use of a great variety of means, which will often tax the resources of the medical attendant to the utmost. I have already spoken of the value of opium in the peritoneal lesion. The tympanitic is often the most striking and distressing symptom, and I regret to say that I know of no treatment by which we can always be sure of relieving it. I rely, however, mostly on the use of turpentine, internally and endemically. In some cases I have seen good results from the use of the acetate of lead, and in others I have seen all means fail. In those cases where the secondary lesions are developed in the uterus, its veins, or its lymphatics, I have seen no advantage from leeching or blistering. The exposure of the abdomen to the air more than counterbalances the problematical advantages resulting from the former, while the latter only adds to the nervous irritation already existing. In these cases, the only local treatment I make use of is chlorinated vaginal injections repeated several times a day, and hot linseed meal poultices kept constantly applied over the hypogastrium.

Fourth, to sustain the vital powers of the system. I believe more patients die from the neglect of this point than from any other error of treatment in this disease. The patient is often sacrificed by a contest between the doctor and the disease, both contributing to exhaust the vital powers. In very many cases remedies are utterly powerless in combating the disease, and the province of the physician is to keep the patient alive until the disease is exhausted. This can only be done by proper nutrition, and the prevention of waste and the restoration of nerve power by the use of alcoholic stimulants. I will not enlarge upon this point ; but I still believe that when a patient with puerperal fever has lived for forty-eight hours, there is constant encouragement for effort, and that the danger is in a certain sense diminished in proportion to the duration of the disease. I will only allude to two points of practice which seem to me of some importance. The first I have already mentioned, the value of a mercurial laxative when the patient has been supported for some days by the liberal use of beef-tea and alcoholic stimulants until the stomach loses the power of taking care of what is put into it, apparently from obstruction of the portal circulation and congestion of the capillary circulation of the mucous membrane of the alimentary canal.

There is another class of cases where the stomach seems to give out all at once from another cause which I will not undertake to explain. Everything is rejected in a few minutes after it is swallowed, with a painful feeling of burning and excoriation. Now, if this condition is not changed the patient will soon die, as she can no longer be sustained. I have in several instances been able to persuade the stomach to resume its functions by adding to each tablespoonful of beef-tea one drop of nitro-muriatic acid, the proportion of the mixture being one part of the nitric and two of the hydrochloric acid.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, SEPT. 22, 1858. DR ELISHA HARRIS, *Vice President.*

(*Reported for the* NEW YORK JOURNAL OF MEDICINE, *by* GEORGE F. SHRADY, M.D.)

Anomalous disease of the knee joint.—Dr. Markoe presented a specimen which had connected with it the following history:—C. T. L., aged 49, cashier, was admitted to the New York Hospital, Sept. 16, 1858. He is a spare, nervous, and rather delicate man, of tolerably regular habits, and has had in early life no severe or seated disease. No tubercles or gout in his family. About 10 years ago, had diarrhœa more or less for a year, and began about that time to have pains and stiffness in various parts of the body, increased in severity on the approach of stormy weather. At the same time he perceived a slight degree of paralysis both of motion and sensation in the lower extremities, so considerable that his legs dragged in walking, and he would frequently stumble and fall. Five years ago he had the little toe of right foot amputated, on account of caries following the too close paring of a corn. The partial hemiplegia and the wandering pains continued and slowly increased until about two years ago, when he was sensible of a decided improvement; and soon after, he observed some symptoms of urinary derangement—such as too frequent micturition, and occasional turbidity of the urine, and for a time a degree of incontinence, which obliged him to wear a bottle.

About the middle of December last, after fatigue and exposure during a storm, he had a rigor, followed by slight fever, and the swelling of the right knee joint. This was attended with but little tenderness, heat, or redness, but with a great deal of pain of an intermittent character.

It impeded the use of the joint so little that he was able, during the whole of it, to go about with a cane. Some œdema of the leg and foot accompanied the attack. After this period, he noticed that on motion of the joint, a grating, or, as he expressed it, a "munching" sound was produced, evidently by the rubbing together of altered synovial surfaces. On the 16th of January, as he was stepping from a stage, he felt a crack in the joint, as if something had given away, and immediately the limb became so useless that he had the greatest difficulty in reaching his home. In consequence of this accident, an attack of subacute inflammation of the parts again came on, and he was for a time confined to his bed. This attack soon subsided, leaving the limb free from pain, but still entirely useless for support or walking.

I first saw him, about two months ago, after the accident. The limb was then considerably emaciated, unduly movable and loose in the region of the knee. This region was irregularly enlarged, which increase in size was due as much to displacement and overlapping, as it were, of the articular extremities, as to enlargement of the bones themselves, which enlargement was evidently to be perceived, and was attended with irregularity of surface not unlike that which surrounds the joints in some cases of chronic rheumatic arthritis. The displacement was such that the end of the femur was thrown forwards and downwards while the head of the tibia projected backwards and upwards. With this was associated a great degree of relaxation of the ligaments, such that the knee could be bent in almost every direction, and he himself could throw it about in a most extraordinary manner. There was no pain or tenderness of handling on motion. On feeling further, it was discovered that the inner condyle of the femur embracing a large piece of bone was detached from the shaft and movable upon it. On the outer and anterior aspect of the joint there is another but smaller piece which appears to be loose and to move independent of the shaft; there is no fluctuation or thickening of integument over the joint. The motions all give a rubbing or cracking sound, or rather sensation, but without pain. The whole limb, from the anterior superior spine to the malleolus, is one and three-fourths inches shortened, while the femur of the deceased side, measured from the trochanter to the outer condyle, is three-fourths of an inch longer than on the opposite side.

His general condition is good, pulse 75, tongue clean, digestive system in good order, urine natural, though at times turbid. Some occasional pains in the lumbar regions. The limb is so entirely useless, and he has received so little assistance from apparatus, that, at his earnest request, it was removed on the 20th of September.

Examination.—On opening the joint, a small quantity of dark, reddish, thin serum flowed out. The general surface of the synovial membrane was more vascular than usual, varying very much in different situations. The membrane itself was very much thickened and opaque, and of a dull yellowish color. In several points these patches of false membrane were attached more or less strongly to its surface. At other points there were great numbers of small villous-like projections from the surface, some of a large size, being single, others of a smaller size were seen in patches of varying shapes. The projections themselves mostly agreed in having a base, or neck of attachment, somewhat smaller than their free extremity, which gave them, when floated in water, a bulbous or pyriform appearance. Some of the larger appendices felt hard, as if containing the elements of cartilage, which indeed the microscope showed to exist in them, mingled with fibrous tissue. There were no loose bodies found in the joint.

The cartilages of incrustation partook of the dull, opaque, yellowish appearance of the synovial membrane, and were much thinner in many places than they should be. They were entirely absorbed in only two or three small patches, where the exposed bone seemed healthy.

The ligaments surrounding the joint were very much relaxed, though thickened, and in several points around the margin of the head of the tibia, bony masses had formed in their substance. One of these of considerable size, seemed in part to be developed in the substance of the semi-lunar inter-articular cartilage. The crucial ligaments were gone, and the place of their tibial insertion was occupied by a patch of small bulbous villosities. The greater part of the external and the whole of the internal semi-lunar cartilages were gone, only about one-third of the ring of the external remaining, which was not much altered from its usual appearance; but terminated abruptly both exteriorly and posteriorly by being confounded in the thickened and villous fibrous folds of the synovial capsule. A separation by fracture was seen to exist of the internal condyle from the shaft. Of the femur, this fragment was displaced a little upwards, and remained connected to its neighboring bone by well organized fibrous bands, leaving a space between the femur and the fragment of condyle, into which the finger could readily be passed. This space seemed lined by a new synovial membrane. The laxity of the union permitted very free motion of the fragment, and accounted in a great measure for the looseness in the movements of the joint, and for his want of power to support himself on it. The bones were somewhat enlarged in the neighborhood of the joint, but appeared to be free from any morbid condition. The surface showed some exostotic irregularities, and the periosteum was thickened.

Sacculated aneurism of the arch of the aorta, causing pressure upon the trachea just above its bifurcation.—Dr. Buck presented this specimen for Dr. Bulkley, and gave the history as follows:—This specimen is from the body of a patient who was in the New York Hospital. He was a seafaring man, 44 years of age, of a well-developed, robust frame, and had generally enjoyed good health. He had suffered for a considerable time with dispnœa, which seized him in paroxysms. Just previous to admission, he was on his way to the Brooklyn Hospital, when he was seized with one of these paroxysms, and in a state of great distress he was conveyed to the New York Hospital by a policeman. I saw him once. I was sent for one day in haste, while I was making my visit, the doctor thinking he might require some surgical aid to relieve him. When I saw him, he was sitting up, laboring for want of breath, his face and hands were very livid, his countenance very anxious, his surface cold, and his pulse feeble and considerably accelerated. He did not say that he had any local pain, but seemed only to complain of great distress in breathing. I was struck with one feature of his case, and that was the sound condition of his voice, which was full-toned and strong. I inferred from that, that the dispnœa did not depend upon the presence of any laryngeal obstruction.

The question of aneurism at once came up, and I concluded from this same fact—the integrity of the voice during the paroxysm—that it was not aneurism. That was the conclusion I came to, based upon my own experience. I had seen several similar cases, but in all, during the paroxysms, the voice was reduced to a mere whisper.

The chest was resonant, though the respiration was very feeble. Here and there a little sibilant râle was present. This was the only time I saw the patient. The report of his case was, that these paroxysms recurred two or three or four times in the twenty-four hours, during the intervals of which he was pretty comfortable. He remained in the hospital from the 2d or 3d of August until the 20th of September. At one time he was so far improved that he seemed really to get better; his pulse, which ranged as high as 120, was reduced to 93. The medication consisted in the administration of tr. lobelia, tr. assafœtida. Hoffman's anodyne, and the inhalation of chloroform. Chloroform and Hoffman's anodyne seemed to afford him the greatest relief.

A few days preceding his death, he relapsed, paroxysms again becoming severe, and he died on the 20th of September. In the progress of his case, there was considerable cough and frothy mucous expectoration. At no time was there any hemorrhage.

This specimen shows an aneurism of the arch of the aorta developed on its posterior aspect. The three large arteries given off from the arch skirt the orifice of communication, which is large enough to admit the end of the forefinger. The encroachment upon the trachea is very nearly in the median line. The mucous membrane of the trachea is entire. The cartilaginous rings encroached upon do not show any alteration to exist. The aorta, on its inner surface, from its origin through almost the whole extent of its thoracic portion, is thickly coated with atheromatous deposits.

This case, in my experience, is peculiar in the feature I alluded to, viz., the undisturbed condition of the voice. This may be in consequence of the peculiar relation of the ascending recurrent nerve not yet being encroached upon in a way to interfere with its functions.

The explorations of the chest did not detect the existence of this aneurism, and in this respect it was not unlike some that had come to his knowledge. He referred to one case in particular, which occurred in the practice of the late Dr. Swett, where the voice was reduced to a whisper during the paroxysms, where there was every reason to suppose that an aneurism did exist, but the most careful and critical examination of the chest could not detect its existence.

Aneurism of the Aorta.—Dr. Krakowitzer exhibited another specimen of aneurism of the aorta, from a man between 40 and 50 years of age. He was healthy until seven years ago, when he had a pretty smart attack of rheumatism, which was not associated with much febrile action however. The attack was not even sufficiently severe to oblige him to keep his bed. The pains seemed to be confined to the lower extremities; generally, the joints not being involved. Since that time, he has been subject to wandering pains, complaining of symptoms which, in consideration of his previous habits, seemed to be owing to indigestion. He was addicted considerably to the use of intoxicating liquors.

It was not observed that his general health began to decline until about ten months ago, when he complained of getting out of breath easily, at the same time suffering from a pain in his chest and a short cough. He was a grocer, and followed his business until last spring, when he was forced to remain in doors. He continued about his store until two months ago, since which time he was confined to his bed. I examined him twice during the last fortnight of his illness. There seemed to be no marked difference in his physical symptoms each time he was examined, though the secondary symptoms varied considerably.

He was a man of medium stature and muscularity, his skin was quite pale, his face was considerably bloated and somewhat livid, and his eyes had a tendency to protrude from their sockets, with a dull, languid expression. He seemed to favor also a reclining position of the body, experiencing great discomfort in any position but this. When I examined him, I recognized a small pulsating tumor, about the size of a walnut, in the space between the second and third ribs, on the right of the sternum. The skin covering it had its normal condition. The tumor was elastic and could easily be diminished by pressure. The impulse over the heart was abnormally extended towards the left. The percussion was dull in a transverse diameter to the extent of four inches, and in a longitudinal diameter to the extent of three inches. The dullness extended to the right as far as the situation of the tumor and immediately around it. Everywhere else the percussion was normal, as was also the respiratory murmur.

On the second examination, I discovered slight râles at the top of each lung, and a small amount of bronchial respiration on the right side. The sounds of the heart were normal, and were not strong at the apex. At the base of the lung, along the course of the aorta, there was a blowing sound discovered, which could be heard over the manubrium sterni ; which was synchronous with the pulsations of the right and left subclavian, right and left carotids, and femoral artery. The pulsations of the femoral were somewhat weaker than the carotid ; the pulsation of the subclavian was strongest. His respiration was, of course, quick and labored. There was serous effusion in the abdomen, and some swelling around the ankles. The urine was not examined. The medication consisted in following out the indications given by the symptoms. He finally died from exhaustion and suffocation.

The post-mortem examination was made twenty hours after death. On removing the sternum at the place where the pulsating tumor could be seen and felt, it was found that an aneurism existed. This was adherent to the intercostal space between the second and third ribs, the muscular tissue at that spot being considerably thickened. The lungs were free from any organic disease except two small spots of tuberculous deposit in the apex of each. These organs (lungs) were filled throughout with a great quantity of serum. There was a little effusion in both pleural cavities.

The heart laid in a transverse position almost exactly in a horizontal line, the base being to the right, and apex to the left. It was hypertrophied to twice its ordinary size. This was mainly due to the hypertrophy and dilatation of the left ventricle, the right ventricle being very little affected. The mitral valve, with the exception of its being thickened at some parts of its margin, was normal and sufficient. Tricuspid was but little affected. The aorta at its origin, as is here seen, swells out into an immense sac which easily contains the two fists. Gradually tapering down until it becomes thoracic, then the artery resumes its natural calibre.

The origin of the innominata, left carotid and subclavian are distinctly seen. The origin of left subclavian seems somewhat enlarged, which accounts for the stronger impulse which it had. The inner coat of the aneurism presents the usual appearance. The aneurism must have existed a great while, considering its size.

There is a small amount of atheromatous deposit between the inner and middle coats of the artery. There can be seen a little sacculated protrusion, corresponding in size and situation, of the tumor felt protruding between the second and third ribs. The abdominal organs were not examined.

REGULAR MEETING, OCTOBER 13, 1858.

Brain and spinal cord in tetanus.—Dr. James R. Wood presented the brain and portion of the spinal cord of a lad 15 years of age, who entered Bellevue Hospital on the Thursday previous. About seventeen days previous to his admission he injured the little and ring fingers of the left hand, rendering an operation necessary for their removal, which was accordingly done shortly afterwards. At the time he was received into the hospital he had the symptoms of tetanus. There was stiffness of the extensor muscles of the neck, more or less dysphagia ; there was also a good deal of trismus, which was not so well marked as the other two symptoms. He was placed under treatment at once. The treatment was that pursued by some of our oldest and most experienced practitioners, opium and whisky. He took about 80 ounces of this liquor from the time he entered the hospital on Thursday until he died on Sunday evening. During all this time he was kept fully narcotized, having taken about a ʒj of morphine. The respiration at one time was down to eight per minute.

The symptoms improving on Saturday in a very remarkable degree, the opium and stimulus were diminished in quantity ; so that the respirations at the time of his death were 28 per minute, and his pulse was quick, which showed that at that time he was not under the influence of opium. The spasms ceased on Saturday, as did all the other tetanic symptoms, and he seemed to die of pure exhaustion, comatose, without a rigid muscle and without a struggle. This case illustrates what has been frequently contended for here, that if a patient could be kept alive long enough to wear out the disease, at the same time being supported, he might in many cases be saved. If this boy had had enough vitality left after the disease had exhausted itself, he would in all probability have recovered. Such, however, was not the case.

Examining the specimen carefully in all parts before the society, he could not detect any trace of disease either in the brain or spinal cord. Every part seemed to be in a healthy condition, with the exception of a small quantity of coagulated blood outside the capsule of the cord, and also a little softening of the cord itself, which he thought was due to post-mortem changes.

He stated that many of the members had met cases where no post-mortem changes manifested themselves ; still that was no reason to him why they should not continue their investigations until they should at length be rewarded with success.

Dr. Sewell asked, if death occurs from exhaustion, why was it that patients with traumatic tetanus almost invariably die, while those who were affected with idiopathic tetanus recovered ?

Dr. Wood stated that such a fact was not the result of his experience. So far as he knew, idiopathic tetanus was as certain to wear out the patient as in the traumatic variety. The main difference consisted in the violence and frequency of the attacks; in traumatic tetanus the attacks were violent and long continued; while in the other case, a succession of mild attacks was sufficient to wear out the patient. He referred to the case of a little boy, the subject of idiopathic tetanus, who was enabled to go to school, the attacks being so slight; but notwithstanding this, the disease, by the constant succession of its attacks, wore him out in three or four weeks.

Dr. McCready remarked, that they generally died of apnœa.

Dr. Wood stated that this was the case. In this connection he referred to the fact that a great many cases of tetanus have been from time to time reported in the journals as having been cured. Most of these occurred in females, who, it is well known get up all sorts of troubles, which are liable to deceive the most careful observer. He knew now a young gentleman who reported eight such cases as having been cured by strychnine. Now, every one knows that this remedy has been tried for this affection with very unsatisfactory results. These cases, he thought, were doubtless some of the varied forms of hysteria. In conclusion, he asked Dr. Markoe how often he had met with idiopathic tetanus in the N. Y. Hospital.

Dr. Markoe stated that he did not recollect ever seeing a case.

Dr. Bibbins stated that he had seen three cases of tetanus; two were traumatic, and the other was idiopathic. One of these occurred in a female, who died twelve hours after he first saw her. In that case he thought it was very difficult to decide whether it was a true case of tetanus or not, although the symptoms were exactly those he had observed in the traumatic variety. The only cause, in his opinion, that could have given rise to it was an ulcer of the ankle; but he could, however, make out no satisfactory connection between them.

Dr. Harris thought it possible that the free use of those liquors which contained strychnine might give rise to this affection, the same as strychnine itself.

Dr. Markoe stated that he would not hesitate, in the case cited by Dr. Bibbins, to refer the cause to the ulcer. One of the worst cases of tetanus (traumatic) that he had ever seen was in a patient who had been severely burned in the foot by treading upon some limestone. Four weeks after tetanic symptoms came on and terminated fatally. He could call to mind several cases where tetanus had occurred without any recent injury. He had noticed that they very frequently came from burns.

Dr. McCready referred to a case of tetanus caused by the separation of a large slough at the back of the neck.

Dr. Gouley asked if any of the gentlemen had seen a case of *trismus neonatorum*?

Dr. Henschell stated that he had seen several.

Dr. Gouley said that he had never heard of it in this city, but it was of very frequent occurrence in the States of Louisiana and Mississippi. He remarked that tetanus being so common on the east end of Long Island, some cases of trismus neonatorum might possibly be met with.

Dr. Markoe remarked that there was something very peculiar about the locality and liability to tetanus on the east end of Long Island. Horses died very frequently there of tetanus, and if any of the inhabitants are subjected to an injury of any kind, they move immediately away from the infected district, inasmuch as traumatic tetanus is very fatal in these parts.

Dr. Harris stated that traumatic tetanus prevailed to a very considerable extent on the eastern shore of Staten Island. He had seen three cases in that locality.

Dr. Markoe stated that in attending a patient with Dr. Knight of New Haven, he (Dr. K.) said that tetanus was much more frequent in that vicinity than it had been for ten years past, which fact made him very uneasy for the safety of his patients after an operation. It seemed in many respects to follow laws of endemic diseases in other localities.

Dr. Wood stated that it was a common practice on the east end of Long Island, when a horse run a nail in his foot, or injured himself in any way, particularly if it occurred in Suffolk County, to drive him into another district as soon as possible, so fearful were they of the consequences. In conclusion, he asked what proportion of the cases of traumatic cases recovered.

Dr. Markoe stated that some time ago he saw a tabulation of sixty cases, where ten recovered. He thought that result not far from the average, under ordinary circumstances; that was the proportion of recoveries that had come under his observation in the New York Hospital. He had seen three cases recover by the use of assafœtida.

Dr. Wood said that in his case injections of assafœtida were used in connection with the opium and whisky. He made use of it from the fact that the remedy had been so successful in the treatment of cases in the New York Hospital.

Dr. Clark stated that he had no experience in idiopathic tetanus; the physicians on the east end of Long Island had told him that it was quite a common affection, and that their success in the treatment of it far exceed any results in the traumatic variety.

Dr. Wood referred to some published cases occurring in the practice of one of his old pupils, who lived on the east end of Long Island, being cured by ice to the spine. He placed two pieces of folded blanket on either side of the spine and applied ice directly to the skin between the gutter that was formed. He treated a dozen cases in this way very successfully. These were principally idiopathic. He (Dr. Wood) stated that he treated three cases in this way, and gave the remedy a fair trial; but all the cases died.

NEW YORK HOSPITAL.

Report on the Surgical Practice of the New York Hospital. By George F. Shrady, M.D.—Having read Dr. Suckley's interesting papers upon the hospitals of Paris, the idea suggested itself to me that perhaps some few remarks upon the practice of the New

York Hospital might not prove unacceptable to the profession at large. It is no part of my purpose to dwell upon the peculiar advantages of this institution, or even to allude in the most distant terms to its position as a school for surgery, but merely to present results in practice and conclusions arrived at in the experience of the different attending-surgeons. Though I am conscious of the difficulty of the undertaking, and am fearful that I cannot do it justice, still I hope that my endeavors may be rewarded with a certain degree of success.

Écraseur.—So much is said now-a-days about the écraseur, it will perhaps not be inappropriate to commence with a short account of the use of this instrument.

There have been but two operations performed in this institution with this instrument—one was upon a case of hemorrhoids, and the other for amputation of the penis. It was first used in the case of hemorrhoids by Dr. Van Buren. The patient, a lady 49 years of age, had suffered more or less from this troublesome difficulty for a period of ten years, during the whole of which time she obtained very little relief from the palliative means usually made use of in such cases. On her admission to the hospital, October 12, 1857, she had four tumors around the verge of the anus; the two largest were about the size of a large hickory nut, and the other two as large as the end of the little finger. She being very desirous that something should be done for her permanent relief, an operation was determined upon, and performed with this instrument four days after admission. The two largest tumors were only removed by the écraseur, the other smaller ones being ligated in the usual way. The operation occupied about fifteen or twenty minutes, and but a small quantity of blood was lost. The parts healed kindly, the ligated portions separating in good time, and she left the hospital entirely cured on the 4th of November following.

The next case occurred in the service of Dr. Halsted; amputation of the penis for warty degeneration of the glans; suspected to be of a malignant character. The patient was 16 years of age, with a fair amount of bodily vigor. The diseased mass occupied the whole of the glans, spreading out into excrescences which were equal in size to a couple of English walnuts. The disease first made its appearance five months previous to admission, a short time after impure connection, and kept gradually increasing until it had attained the size already mentioned. Its growth was, without doubt, very much accelerated by the want of proper attention to cleanliness. Various means were resorted to while in the hospital to reduce the diseased mass, but with no good result attending; finally, a consultation of the attending-surgeons was held, and it was deemed expedient to amputate. This was accordingly done.

The operation, which occupied about twenty minutes, proved a very successful one as far as the amputation was concerned, but a considerable amount of hemorrhage followed from the open mouths of several vessels, one of which was the arteria dorsalis penis. The application of several ligatures was rendered necessary. The parts healed nicely, the process being much accelerated by the favorable shape of the strap following the action of the instrument, the integument tending to turn inwards, leaving but a small extent of raw surface to heal by granulation. The meatus urinarius was kept pervious by the occasional introduction of an instrument, and before he left a large sized catheter could easily be passed. He was discharged cured a couple of weeks after amputation. No sloughing followed in either case. The instrument used in both cases was *Chassaignac's*, manufactured by *Leur of Paris.*

The last case tends very decidedly to disprove one of the advantages claimed for the écraseur, viz., arrest of hemorrhage. A considerable amount of blood was lost, notwithstanding due deliberation was employed in the lacerating process.

This fact is also illustrated by a case that occurred in the practice of Dr. Van Buren, at the St. Vincent's Hospital, after amputation of the cervix uteri by means of this instrument, in which thirty-five minutes were employed in the operation. An artery required the ligature in consequence of its continuing to give forth blood.

I have learned that Dr. Isaacs, of Brooklyn, performed subsequently a similar operation upon the cervix uteri with a good result.

The surgeons generally look upon this instrument as useful in cases where amputation has to be resorted to upon parts which are not easily accessible to other instruments, and where, under ordinary circumstances, profuse hemorrhage is expected. They, in common with every one who can amputate with dexterity and neatness, by no means sanction the use made of it by some of the French surgeons of the present day; for instance, as an instrument for amputation of the limbs. With all the advantages claimed for it in such cases, they are by no means sufficient to tempt the operator to throw aside his catlin and resort to a practice which, at the best, is a very barbarous one.

Amputation of limbs.—Amputations in this institution are of frequent occurrence, inasmuch as the class of cases which are admitted that require such operations are very numerous.

The circular method is the one most commonly employed, after the method usually attributed to Alanson, but really due to Louis, who practised nearly a half a century before him. It consists in forming a cone-like cavity for the stump. The flap is composed partly of integument and partly of obliquely-divided muscles, being made by directing the cutting edge of the knife upwards. This mode of operating has been employed for a number of years by Dr. John Watson, who is a strong advocate for its use, as are also Drs. Markoe and Van Buren, and I believe their views are supported by the other attending surgeons. This method refers to amputation of all the limbs.

This operation, although not elegant in its appearance, leaves the stump in a very favorable condition for healing.

Formerly, the flap operation was very much in vogue, and at one time was employed almost entirely. Dr. Valentine Mott first introduced this practice into the hospital, and is still a strong advocate of its applicability. This method is now almost entirely abandoned, principally for two reasons. In the first place, there is a larger surface exposed for granulation than is the case after a circular operation, and consequently the healing of the stump is proportionately retarded. In the second place, more of the limb has to be sacrificed, the bone being clipped off shorter than in the circular method, in order that the flaps may be sufficiently enlarged.

It seems also, in regard to flap operations, that they are more suitable for cases in which union by the first intention can be counted upon; but in large hospitals such stumps, in a great majority of cases, heal by granulation, and hence they heal less rapidly and favorably than in the circular stumps.

I have seen but one stump heal by first intention. This occurred in the service of Dr. Halsted, in the person of a boy about thirteen years of age, where amputation was resorted to in consequence of disease of the knee joint. The circular method was used. This result is of rather infrequent occurrence in the hospital, but when it does take place, the amputations are secondary, performed in consequence of disease, and in young subjects. On the contrary, primary operations in adults very rarely, if ever, are united by first intention.

It has been stated by the surgeons that primary union, after flap operations, in the hospital was, for some unexplained reason, of more frequent occurrence a number of years ago than at present. Doubtless this is the reason why the flap operations have in some degree lost favor.

The surgeons have lately used a method of operating upon the leg which proves very satisfactory, by making two semicircular flaps of integument, commencing the incisions in front, and terminating them behind, so that the line of meeting of the flaps shall be vertical, as the limb lies on the bed. The flaps being cut but not raised from the subjacent tissues, the integument above the incisions is strongly drawn up by an assistant, and the muscles are excised by successive touches in the same manner as in the ordinary circular operation. This makes an admirable stump, and avoids the unseemly prominence always seen when the skin is brought together after the circular method. The projecting end of the tibia is carefully bevelled off, in order that no undue pressure be made upon the skin of the stump. More recently this method of incision, which appears to combine the advantages of the flap and the circular operation, has been applied to amputations of the thigh, by Dr. Markoe, and has proved in every way satisfactory.

There is a tendency among the surgeons of the hospital to close the stumps very lightly after an amputation, so as to court union by granulation rather than by first intention, experience having shown that with light open dressings the results are more apt to be favorable. On the contrary, the heavy dressings, such as compresses, bandages, and the like, necessary to procure union by first intention, far from producing the result required, tend to retain the pus which is almost certain to form, thus giving rise to abscesses, burrowing, and the like, which make the process of cure very tedious.

In the treatment of these stumps, great attention is given to cleanliness and position. The applications are removed at least once a day, and oftener if necessary, depending in a great measure upon the quantity and character of the discharge. The dressings for the most part consist of patent (picked) lint, and an ointment composed of one part of balsam Peru, and seven of yellow cerate. This ointment is used almost altogether, it having been found by long experience to answer an excellent purpose, in hastening the healing process, by the moderate stimulation it gives to the granulations, which are so apt in large hospitals to assume an indolent character. Sometimes, though very rarely, all that is required is the application of simple cerate. These dressings are kept applied by a light bandage.

This, then, is the dressing usually employed in an ordinary case; there are, of course, now and then, individual instances which present themselves, where it is necessary to modify this course of treatment according to the peculiar indications that present themselves; with these facts every one is so well acquainted that any further allusion to them appears unnecessary.

When the tissues at the extremity of the stump are disposed to hang in a flabby and irregular mass, as is very frequently the case, especially after sloughing has occurred, the parts are supported, the edges of the granulating surface are approximated, and the whole moulded into shape by the proper application of wide strips of adhesive plaster. These are placed sufficiently wide apart to allow the free exit of matter. By these means alone, a stump, which, in the early part of the treatment, presented an unsightly appearance, is made, if not as decent looking, at least as useful as if nothing of the kind happened. I am not aware that this practice is peculiar to this hospital, still it deserves its share of notice in connection with the treatment of stumps.

Dr. Markoe has recently amputated four times, consisting of one amputation of the thigh, two of the forearm, and one of the leg.

The amputation of the thigh, performed September 20, was for an anomalous disease of the right knee. The particulars of the case are given in the minutes of the New York Pathological Society, for September the 22d. (See page 387.) The lateral flap operation was resorted to in this case, and will, to all appearances, make a very pretty and useful stump. The patient is improving, and the parts have now nearly entirely healed over.

The amputations of the forearm were both performed on the right side, in consequence of the existence of compound fractures. In one of these cases, the injury was the result of a severe gun-shot wound of the wrist and hand. The patient died a week after the amputation, of pyæmia. The other was a railroad accident: the patient still remains in the house doing well, the stump healing nicely. Both these operations were circular, and performed at about the junction of the middle and lower thirds.

The leg amputated was also the seat of a compound fracture. In this case the fibula of each leg was broken, the fracture in the right being compound, and low down, involved the ankle joint, rendering secondary amputation imperative. The lateral flap method was also used in this case, and a very handsome stump was left, but the patient, being a man of very intemperate habits, sunk, and died on the second day after the operation from prostration.

Amputation at the left shoulder joint.—Dr. Buck performed this amputation last month. The operation was rendered necessary by the occurrence of a very extensive compound fracture of the forearm and arm. The laceration of the soft parts, which was very extensive, reached as high as the axilla, and for a short distance underneath the pectoral of the injured side. The patient was considerably prostrated on admission, and as soon as a proper amount of reaction came on, the amputation as above was resorted to. The oval method of the French was used, by making two vertical semicircular flaps on either side of the shoulder, meeting above on the acromion, and underneath in the axilla. The edges of the wound were brought together with sutures, adhesive straps, and a compress and bandage over the whole. The patient died on the second day after the amputation from imperfect reaction.

Excision of the head of the femur in hip-joint disease.—This is the first operation of its kind that has been performed in this institution. The patient was a young boy about eleven years of age, who had been in the hospital with an affection of the right hip since the 27th of March last. He had been treated with the straight splint, for a considerable time after his admission, with very little benefit. An abscess formed about three months ago, and opened itself about the middle of the anterior aspect of the thigh, from the effects of which he lost ground pretty rapidly, and became reduced to such a state that the operation was proposed by Dr. Markoe, as offering the only chance to save his life. It was performed on the 27th day of September.

A longitudinal incision was made along the hip, about six or seven inches in length, having its centre over the trochanter major, from which point an incision, three or four inches long, was made, at right angles with the former, across the glutial region. The flaps were dissected up from the bone, when the abscess, as had been supposed, was found to communicate with, and involve the joint. The capsule of the joint also had participated very much in the diseased action. The head of the femur was dislocated forward by forcible rotation and adduction, and separated by the chain-saw at a point corresponding to the insertion of the capsular ligament, in the direction of the horizontal axis of the body. A small portion of the floor of the acetabulum had separated itself, and was removed. The head of the bone was much atrophied, and the cancellar structure was filled with pus-globules. The cartilage of incrustation was destroyed, which was also the case with the cavity of the acetabulum, which was carious over its whole surface. This was all removed by the gouge. All below the section in the femur seemed to be healthy bone structure. So far, the operation has proved a very successful and satisfactory one. The patient has been steadily improving ever since, and at the end of a month after the operation promises to recover.

Dr. Markoe, at some future time, intends to publish the case in full, and present it in its proper bearings, when the result is more certainly known.

LONG ISLAND COLLEGE HOSPITAL.

(*Report* by John G. Johnson, M.D., Adjunct Surgeon.)

Case 1.—*Deformity of mouth from gangrene, and necrosis of inferior maxilla—the result of mercurial action.* Under Drs. Daniel Ayres and Whaley.—A young man aged 23, presented himself at the Hospital with the following history. At the age of three years he suffered from a severe attack of dysentery, during the treatment of which he became profusely salivated. A gangrenous spot showed itself just beyond the left angle of the mouth, which continued to spread until it had penetrated the orbicularis oris, and involved a considerable portion of the cheek. The teeth, together with the alveolar process, and a considerable portion of the body of the inferior maxilla, gradually exfoliated. The parts ultimately healed. The left angle of the upper lip being firmly attached to the body of the lower jaw, whilst the remaining portion of the lower lip upon the right side was connected with the left side of the face by a thin and hard cicatrix. He was unable to close the mouth, or to retain his saliva, and took his food with difficulty. The large chasm thus exposed was occupied by the tongue, which was thrust out like the tongue of a dog. He was unable to articulate, and carried on conversation by signs and noises which his friends had learned to interpret.

He states, that ten years previous a surgical operation had been performed with a view to relieve the deformity, but without success. This horrible deformity had excluded him from society and from occupation, rendering him a disgusting object even to his nearest friends.

Operation.—An incision was commenced above the left angle of the mouth, and carried upwards and outwards toward the left ear, the distance of three-quarters of an inch; from this point a curved incision was carried perpendicularly downwards beneath the chin to a point corresponding with the right angle of the mouth. Another incision was commenced upon the lower lip about half an inch from its median line, and carried downwards to join the former incision beneath the chin. The whole lower lip was then dissected off from the body of the bone. The cicatrix remaining attached to the bone, forming a curvilinear triangle, was split from below upwards, turning the integumentary surface towards the mouth, with a view of forming a supporting background upon which to plant the lower lip, and likewise to prevent fluids from gravitating into the line of union. A ligature was therefore passed through its upper angle and brought out over the lower lip. The large flap from the chin was now slit up, and united by points of suture to the angle of the upper lip, and to the cheek, which had previously been freely separated from the ramus of the jaw, to which it was firmly bound by false adhesions. The whole was additionally secured by straps and a retentive bandage carried over the head. Strict quietude was enjoined, and all food, which consisted of milk and soups, to be taken through a glass tube.

On the sixth day the sutures were removed, entire union had taken place over the whole wound, leaving only a small fistulous opening the size of a knitting needle, through which the saliva passed from the mouth on attempting to move the jaws. At the end of the two weeks this point, continuing open, was deeply touched with a stick of solid nitrate of silver, and hermetically covered with charpie soaked in collodion. Four weeks from the operation this dressing was removed and the opening was found closed. The restoration of the functions of the mouth was thus complete and his appearance much improved. His speech, which of course required education, has since been entirely restored.

Case 2.—*Neuroma following amputation—Resection.*—Under Drs. Bauer and Johnson.—Theresa Simmons, aged 29, a healthy Irish woman, caught her right hand and forearm in the machinery of the cotton factory, on the corner of William and Van Brunt Sts., on the 12th of July, 1855. Immediate amputation was performed, four and a half inches below the elbow. The patient states that as the wound commenced to cicatrize, neuralgic pains were so intense as to frequently deprive her of sleep. The pain increased in severity till, on the 12th of July, 1858, she presented herself at the clinic of the Long Island College Hospital. The general appearance of the patient was that of great prostration, very much emaciated and dyspeptic. She stated that her sufferings were so great that she was willing to submit to any treatment that would relieve the pain. The ends of the bone were barely covered by the firmly adhering integuments, and on slight pressure on the anterior portion of the stump, the most violent twitching and intense pain were produced; even the friction of her dress over the surface was intolerable. The stump was in a state of constant uncontrollable motion. The diagnosis was neuroma, and reamputation was advised. She was admitted to the Hospital, and the operation was performed by Dr. Bauer.

A careful dissection of the stump, made by Dr. Johnson, exhibited three large neuroma; one of the radial nerve, one of the ulnar nerve, as large as an ordinary filbert, and one of the median nerve. All were situated between the ends of the bone and the cicatrix. The ends of the nerve were so firmly incorporated with the cicatrix that dissection was impossible. The neuromata seemed to have been produced by the compression of the cicatrix. The wound healed by first intention, and the patient was discharged from the Hospital. August 31st, she presented herself at the Hospital complaining of slight neuralgic pain in the stump, when a small portion of the ulnar nerve just above the elbow was excised, since which time she has improved in her general health, is entirely free from pain in the stump, and is attending to her ordinary occupation.

Case 3.—*Cystitis—Abscess opening into urethra—Bright's disease—Dyentery—Autopsy.*—Under Drs. Chapman and G. D. Ayres.—This patient was an Englishman, aged 78; fifty years ago he had urethritis for the first time, since then he has had several attacks. He had had hydrocele three times. Six years ago he had so severe a stricture that he entered the Massachusetts General Hospital for treatment. Since then he has been in the constant habit of drawing off his water by catheter, being unable to urinate without. He entered the Long Island College Hospital for retention of urine, having been unable to introduce even a flexible catheter; in his attempts he had caused copious hemorrhage: for four weeks he had been unable to pass an instrument.

When admitted, he was able to pass only a small quantity of urine at a time, and that with great difficulty, with a constant desire to urinate; the urine having a strong ammoniacal smell. He had anorexia, a coated tongue, and costive bowels--great tenderness over the bladder, so that he was unable to sleep. A No. 7 catheter was passed without much difficulty or pain. As soon, however, as the bladder was relieved of its contents, bringing its coats into contact with the instrument, the sudden contraction produced a sensible blow, which was conveyed to the hand through the instrument, and attended with excruciating pain. His urine was of the specific gravity of 1.010, not coagulable with heat or nitric acid; pus was found by the microscope, and small dark clots were brought away from time to time by the catheter. His urine was frequently drawn by the catheter and chalybeates administered. He remained in much the same condition till some seven days before his death, when he had an attack of dysentery, tenesmus, frequent desire for alvine evacuations, which were at first bloody and mucous; after two or three days they were decidedly purulent in their character, and before his death contained nothing but sanies without feculent matter.—He died Sept. 28, from exhaustion.

Sectio cadaveris.--The whole rectum and ascending colon were softened and ulcerated. The kidneys were affected with the second stage of Bright's disease, granular and fatty--the capsule easily peeling off; an abscess had formed around the prostate in the cellular tissue, which had been discharging through the urethra antecedent to his admission, as the pyogenic membrane lining the abscess was well formed.

Case 4.—Enteritis—profuse hemorrhage, Autopsy.—Under Drs. CHAPMAN AND DAVOL.—Caroline Schwaller, 25 years of age, born in Germany; she had been under treatment for three weeks previous to her admission to the hospital, for diarrhœa; when admitted there was no fever, her skin was dry; the tongue was coated and moist; pulse feeble; abdomen soft, neither hot, tympanitic, or resilient on pressure; slight tenderness on pressure in the right iliac fossa. She passed blood in her stools on the day of admission, for the first time.

The alvine evacuations were very frequent. She was ordered ℞. pulv. Doveri, grs. xii.; hydrag. submur. grs. xv., div. in chart. iii., one to be taken every three hours, to be followed by oleum ricini ℥i. Bilious evacuations followed, and the next day she was ordered pulv. Doveri every three hours, with enema of plumbi acet. et. tr. opii. Under this treatment her condition seemed markedly improved. The dejections were free from blood, infrequent and bilious. On the second night after her admission she had a profuse hemorrhage from the bowels, amounting to ℥xl. On the next morning she was in a profound collapse, from which she did not entirely recover for twenty-four hours. She was kept on beef tea and brandy, which was continued during the day; under this treatment she rallied, the extremities became warm, and her general condition improved. On the fourth day from her admission there was a recurrence of the hemorrhage, to the amount of ℥xii. Two days later there was another sudden, copious, and involuntary discharge of blood, from which she died the following morning.

Sectio cadaveris.—The mucous membrane of the large intestine was thickened and inflamed, in many places giving way under slight pressure. There was ulceration of the rectum, colon, cœcum, and 14 inches of the lower portion of the ileum. The ulcers were deep, many on the point of perforating the peritoneum; several were perforated by the weight of the fæcal matter in removing. The meso-colon was extremely vascular, and the vessels could be easily traced to the deep ulcerations. The hemorrhage, which was the immediate cause of death, had been produced by the ulcerating through of these vessels, and the blood thus escaping into the intestines.

Case 5.—Calculus of the kidney—Fatty degeneration of the brain—Autopsy—Under Drs. Chapman and Davol.—Richard Smith, American, 40 years of age, was admitted to the Hospital, May 31st; four weeks prior to his admission he had been seen by his physician, and complained of indistinctness of vision. The next time he was seen he had spasmodic twitchings of his right arm, ulcerated sore throat, and a coated tongue; a few days after this he lost the power of speech, and was admitted to the Hospital. He had been a very temperate man, but during the past winter, had been obliged to live on scanty diet, chiefly bread and a little weak tea. When admitted he was unable to speak, could not protrude his tongue. One curious symptom was noticed, by pressing on the inferior maxillæ, there were choreal twitchings of the right arm, which could not be produced by pressure upon any other portion of the body. His breathing was rapid and bronchial; his urine was nearly normal in amount, light colored, and of the specific gravity of 1.014. Abundance of albumen was shown by heat, nitric acid, and the microscope. Beef tea and brandy were ordered; he had great difficulty in swallowing, sank rapidly, and died four days after admission.

Sectio cadaveris eleven hours after death. The upper portion of both lungs was studded with tubercles. The cerebellum was softened, and examined by the microscope, showed fatty degeneration. The heart and liver were healthy. The right kidney was three times the normal size; the whole upper portion of it was changed into fatty tissue; the pelvic portion of the remainder was occupied by a large mass of fat, immediately beneath the lining membrane of the pelvis of the kidney. This membrane was greatly thickened, and in many points red and mammillated. The cortical structure of the kidney, involving its superior half, was entirely obliterated, together with the infundibula, forming a sacculated condition of the whole organ. This sac was occupied by an irregular calculus, the body of which was two inches in length, by one inch in breadth, surrounded by pedunculated masses taking the form of the distended calyces which they occupied at the lower portion of the kidney; cortical portion of the kidney was still in a condition to secrete urine.

PART SECOND.

CRITICAL ANALYSIS.

Art. IX.—*A Manual of Psychological Medicine; containing the History, Nosology, Description, Statistics, Diagnosis, Pathology and Treatment of Insanity. With an Appendix of Cases.* By John Charles Bucknill, M.D., London; Licentiate of the Royal College of Physicians; Medical Superintendent of the Devon County Lunatic Asylum, etc., etc.; and by Daniel H. Tuke, M.D., Licentiate of the Royal College of Physicians, London; Lecturer on Psychological Medicine at the York School of Medicine; and Visiting Medical Officer to the York Retreat. Philadelphia: Blanchard and Lea, 1858.

A Concise History of the Entire Abolition of Mechanical Restraint in the Treatment of the Insane; and of the Introduction, Success, and final Triumph of the Non-Restraint System. By Robert Gardiner Hill, F.S.A., Member of the Royal College of Surgeons, England; late one of the Visitors of the Lincolnshire County Lunatic Asylum; and formerly Resident Medical Superintendent of the Lincoln Lunatic Asylum. London: 1857.

Unsoundness of Mind in Relation to Criminal Acts. An Essay to which the First Sugden Prize was awarded by the King and Queen's College of Physicians in Ireland. By John Charles Bucknill, M.D., London, etc., etc. Second edition. London: 1857.

Special as the subjects of psycho-pathology and psychiatrics have become, they can never altogether lose their interest for the general medical practitioner. The recognition of the fact that mental disorders depend for their existence upon cerebral disease, sustains their inclusion within the broad domain of pathology; while their influence upon the higher relations of the individual also brings them necessarily under the notice of metaphysical, forensic and legislative science.

The study of insanity, with rational views, dates only from the latter part of the last century. It need not surprise us, therefore, that, although numerous treatises and fragments, by able authorities, have from time to time appeared, no sufficiently systematic text-book has existed, until now, embodying all the advances that have been made. The authors of the work first named above, observe, therefore, with reason, that they have long felt the want of a treatise on insanity adapted to the use of students and practitioners.

The facts and reasonings most important to the understanding of the subject, in its present aspects, have lain scattered in various monographs, reports, and reviews, and in journals especially devoted to psychological medicine. So much was this the case, that we had accumulated more than a score of the principal recent contributions upon it, for collective comparison; the special analysis of which has been rendered unnecessary, by the reception of the Manual of Drs. Bucknill and Tuke. Our task, and that of all students of insanity, is thus made a comparatively easy one.

We need have no hesitation in saying, that the work just alluded to is one of excellent character, and adapted to fill a very important place.

Dr. Bucknill is already well known as the author of many valuable essays and papers upon topics connected with insanity; being, in fact, among its foremost investigators at the present time. Dr. Tuke has also, besides his own reputation as a writer and teacher, the prestige of a connection with an institution, founded by one of his own name, which held a most important position in the early reforms in the management of lunacy.

The earlier chapters of the Manual, on the History, Nosology, Description and Statistics of Insanity, are from the pen of Dr. Tuke. The remainder of the work, treating of Diagnosis, Pathology and Treatment, with an Appendix of Cases, is by Dr. Bucknill.

The first chapter sketches the history of insanity as known among the ancients: considering the influence of the civilization of the Egyptians, Greeks, and Romans, upon the amount of mental disease among them. The second refers to the opinions of ancient medical writers upon the treatment of the insane. Both contain matter of much interest. There appears to be no authority for the genuineness of the treatise upon insanity published with the works of Hippocrates. Asclepiades was definite in his directions for the treatment of the insane. He prescribed music, considered bleeding murderous, and referred, though without confidence, to the earlier use of narcotic fomentations. He was also, according to Feuchtersleben, an opponent of the use of bodily restraint, except in the most dangerous cases. The treatment of Celsus for alienation was characterized by harshness. In advance of others, however, upon one point, he advocated a full diet in some at least of the mental affections, connected with insomnia. Cœlius Aurelianus, in cases of violence, instead of padding the room, padded his patient, with soft wool. Dr. Tuke regards him as a better authority upon the treatment of insanity than Galen.

The third chapter takes up the interesting question, of the bearing of modern civilization upon insanity. This inquiry is beset with difficulties, and has been very illogically dealt with by many writers; especially as regards the proportion of the insane to population.

In England and Wales, statistics upon record prove that there is, at the present time, one insane person (or idiot) to 577: being, among males, one to 616, and among females, one in 543. Adding, however, an estimate of the insane not reported to the Lunacy and Poor Law Commissioners, Dr. Tuke does not doubt that the true proportion should be one insane (or idiotic) person to every 300 of the population. The ascertained number in Scotland in 1857 was one in 390; subject to a probable addition similar to the above. In Massachusetts, in 1850, there was one lunatic in every 427, and one idiot in every 1,034; of both, one in every 302.

To compare the present extent of insanity, as indicated by these statistics, with its extent a century ago, Dr. Tuke considers a vain attempt.

His opinion, however, is decided, that the liability to mental disease is greater (other things being equal) in a civilized and thinking people, than in any race whose intellectual faculties are but little called into action.

"Civilization, with its attendant knowledge and education, creates social conditions, and offers prizes dependent solely upon intense intellectual competition, unparalleled in any former age, and of course unknown among barbarous nations, which of necessity involve *risks* (to use no stronger term) which otherwise would not have existed."

"Dr. Guislain observes, that the people of European and North American civilization are, as it were, in a state of continual intoxication—intoxication of the emotions—intoxication of personal dignity—intoxication arising from constantly renewed impressions. It is not thus with those nations which most closely approach a state of nature; men who live far from the tumults of what we call the world."

Notice is taken of the assertion made by Sir Andrew Halliday that there is a larger number of pauper lunatics in the agricultural than in the manufacturing counties of England.* Dr. Tuke does not consider that even the admission of this statement should warrant the inference drawn, that it opposes the view that civilization favors the prevalence of insanity. But he goes farther, and boldly denies the *fact*: showing the error in which the supposition has originated. Instead of taking the proportion of pauper lunatics to the pauper population in the respective counties, an estimate was made of the proportion of pauper lunatics to the total population of the county; and moreover, no attention was paid to the comparative mortality of the respective districts. Several writers on the continent of Europe state that their statistics exhibit a larger number of lunatics in cities than in rural districts. Finally, however, Dr. Tuke concludes, that

"Inasmuch as all civilization is, up to the present time, to be regarded as imperfect and transitionary, it does not necessarily follow, from the foregoing, that civilization, carried out to its perfect development, a civilization which should exactly temper the force of the emotions, moderate intellectual exertion, and banish intemperance, it does not follow, perhaps, that such a civilization as this, would generate mental disease. Even such a condition of society as this, however,

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* Halliday ascribes this in part to the women laboring in the field during pregnancy.

(which, it is to be feared, will never be realized,) would, we believe, present greater danger to the integrity of the great centre of the nervous system than a state of barbarism."

We have, in the fourth chapter, a history of the amelioration of the condition of the insane in modern times, especially in regard to mechanical restraint. This is well written and full; although mention might have been made, also, of the labors of Tenon, Daquin, Chiarugi, and Veitch, who are not named. We miss, too, with regret, the account, in detail,* of the memorable inauguration of Pinel's enterprise by the liberation of fifty-three patients in the Bicêtre, in 1792; omitted from want of space. Ampler justice, however, is done, than in the work of Gardiner Hill, to the contemporaneous reform originated, independently, by the Society of Friends, in the York Retreat: a reform the more important because, as Dr. Conolly observes, before that period, "among the bad, the York Asylum was the worst." It is singular, indeed, that more than twenty years should still have elapsed, before, upon the publication of an account of the Retreat, by Samuel Tuke, in 1813, any considerable progress was made in other institutions in Great Britain in improving the treatment of the insane. Until 1814, the York Asylum itself still continued to be the scene of the worst abuses. At Bethlem, also, to as late a period, lunatics were treated like wild beasts; nor was it much better in other places.

The next era in this eventful history, was that of the experiment, in Lincoln Asylum, from 1829 to 1838, of the abolition of mechanical restraint in the treatment of lunacy. It is to this subject, especially, that the work of Mr. Hill is devoted, which is named at the head of this article. Controversy had existed in regard to the justice of the claim made by Mr. Hill and his friends, and put forth in the form of a public testimonial, to the origination of the idea, and actual experiment, of *total* abolition of mechanical restraint. It is placed beyond doubt that, when conceived by him, this idea met with general opposition, and with distrust even from those apparently best qualified to judge of its merits. In S. Tuke's account of the Retreat, for example, it had been observed, that "we cannot anticipate that the most enlightened and ingenious humanity will ever be able entirely to supersede the necessity of personal restraint." A judicious use of this had been, indeed, in the experience of the Retreat, of service; leading its officers to the conclusion, that, from the association of mental with bodily action, "such a degree of restraint as would not be materially painful, in a state of calmness, has a tendency to abate the paroxysm."

Dr. Charlesworth, attending physician to the Lincoln Asylum, while earnestly striving for many years to mitigate the severity and frequency of restraint, did not suppose it possible altogether to abrogate it, as was shown by his exercising much ingenuity in contriving "quarter-boots," "buckskin and round-cornered buckles," etc., for the purpose. Dr. Charlesworth himself acknowledged this, expressly, in a speech before the Provincial Medical Surgical Association, in these words:

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* Quoted in Mr. Hill's work, from the Brit. and For. Med. Review, No. I. p. 286.

"The real honor of first introducing the system" of total non-restraint "is due to Mr. Hill."

The latter proceeded at once upon the principle, that "moral treatment, with a view to induce habits of self-control, is all and everything." Satisfied that "with window-guards, windows were broken; with fire-guards, patients were burned to death; and with strait-waistcoats and other instruments, patients were hanged, strangled, and murdered," he undertook the complete substitution for all of these, of *watchfulness.* The success of the experiment commended it, though only by degrees, and with the aid of long perseverance, to the governors of Lincoln Asylum, and to the commissioners in lunacy, as well as to medical officers of other institutions. Dr. Charlesworth at once gave it his hearty and most important coöperation—"To his steady support, under many difficulties," says Mr. Hill, "I owe chiefly the success which has attended my plans and labors. He originated, besides other assistance, the requisite alterations and adaptations in the building."

The perusal of Mr. Hill's volume, therefore, enables us to justify the opinion of Dr. Tuke, that it is due to him to admit, that he was the first to assert, and to carry into practice, the principle of the entire abolition of mechanical restraint. It is probable, however, as Dr. Tuke adds, "that, had not the experiment been carried out on a much larger scale at Hanwell by Dr. Conolly, with far greater success, a reaction would have ensued, of infinite injury to the insane." To Dr. Conolly, therefore, appears especially to belong the merit, with the opportunity, of bringing the non-restraint system into its present position of general recognition and importance, particularly in England and Wales. It is said by a writer in the *Brit. and For. Medico-Chirurgical Review*, that there are now about 14,000 lunatics under treatment in the large English county asylums, and that there is less hardship or severity towards any of these than is practised towards the scholars in the public schools: it being pretty certain that a straight-jacket could not be found in any of those institutions.

In Ireland and Scotland, the same writer states that some form of restraint is yet employed, although not frequently, in most of the asylums. In France, says Mr. Hill, "the old system is still adhered to. At this time, the French 'Aliénistes' cry down non-restraint, as the English physicians used to do in the earlier years of their existence." In Germany also, mechanical restraint is still extensively in use. Nor has it been absolutely abandoned in America. Tranquillizing chairs, muffs, belts, etc., are yet to be found, although rarely used, in our asylums. The following is from the *American Journal of Insanity*:*

"The sentiments of American psychologists at the present day may be found in the report of the tenth meeting of the Medical Superintendents of American Institutions for the Insane, published in the *Journal of Insanity* for July, 1855. In a discussion following the reading of the paper upon the Non-restraint System, the conclusions of the writer, unfavorable to the abolition of restraints, were concurred in by all the members present."

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* Jan. 1857.

At a later meeting of the same association, Dr. Tyler, of New Hampshire, read a paper on the Care of the Violent Insane. A discussion ensued in regard to the kind and amount of personal restraint most suitable for their treatment: a *minimum* was favored by all.

Dr. Bucknill, in the *Asylum Journal*, writes thus:

"Patients are also met with, who, with the free use of their limbs, and under the most gentle and patient treatment, are incorrigibly suicidal, or intractably malignant in character and conduct. The history of the non-restraint system under such circumstances, is a chapter which Dr. Conolly has not yet written."

Drs. Butler and Jarvis, in communications reported in the *American Journal of Insanity*, relate cases of persons subject to insane or homicidal impulses, who had warned their friends against giving them a liberty which they at times considered themselves liable to abuse.

Not to protract this discussion, however, the principle of Dr. Bucknill may be considered as sound: that "the system of non-restraint must be advocated as a *best possible system*; subjected to many difficulties and many counterpoises, but still the best." We may add to this the summary view of an American medical superintendent, Dr. J. H. Worthington, written just after his return from a visit of inspection to the asylums of Europe,* which is the more interesting, as the institution of which he has charge is under the control of the Society of Friends and was formed upon the model of the York Retreat.

"Whatever we may think of the advantage of the 'non-restraint' system, its possibility is no longer doubtful. It is certainly interesting to witness at Hanwell, with its 1,200 patients, the practical working of the system, and while we may applaud the spirit of improvement and genuine philanthropy that led to its introduction there, and may be willing to admit that the nearer we approach to it in the general management of the insane, the more is their condition elevated and improved, we may yet well doubt the wisdom of absolutely rejecting, under all circumstances, a remedy that might, by any possibility, be found useful."

The subject next adverted to, in the Manual before us, that of the definition of insanity, is so nearly connected with those of its diagnosis and pathology, that notice of it may be postponed for the present. Classification is then taken up; and the oldest as well as newest systems of nomenclature of mental diseases are examined with all their complexity. Hardly any of these afford advantages for practical purposes, superior to those of the familiar arrangement, based upon clinical grounds, which divides disorders of the mind into idiocy, dementia, melancholia, mania, and monomania; with the later subdivisions of dementia, into primary and secondary, and of mania into intellectual or delusional, and emotional or moral insanity. All such divisions, however, are, as Dr. Tuke remarks, "only the points and headlands of a recently-discovered coast, which navigators have but partially delineated." The true aim of modern psychology is, to establish a system wholly compatible with, if not entirely based upon, physiology: whose imperfections, therefore, must retard its evolution. The nearest approach to this is the scheme of Dr. Noble; in which mental diseases consist of three groups: emotional, notional, and intelligential; to which Dr. Henry Monroe has added their classification into 1, those with mental exaltation, and 2, those with mental depression. The terms of Dr. Noble are, especially the second, reasonably objected to by Dr. Tuke. Might not the phrases sensorial, intellectual, and emotional, correspond sufficiently with the physiology of the day, as indicating respectively, the seat of disorder in the centres of sensation, constituting illusions or hallucinations; delusions, or derangements of the reasoning faculties, occurring when it is seated in that part of the cerebrum which is their organ or organs; and errors of feeling and impulse, when the site of disease is in the apparatus of the affections, moral emotions and propensities? The obstacle to this, of most importance, is, the present view of so high an authority in physiology as Dr. Carpenter, who, notwithstanding the clearness with which he defines and illustrates the emotional consciousness, gives to it, in his theory of the brain, no special seat whatever: supposing that the ideational part of every emotion has its functional place in the convolutions of the hemispheres, while the sensorium supplies to each its objective occasion, and is the sole centre of all phases of consciousness.* With more space, we should not hesitate to undertake the refutation of this arbitrary and unsatisfactory hypothesis; preferring, with Sir James Mackintosh, to consider, that "a perception and an emotion have necessarily this alone in common, that both are states of mind." Dr. Bucknill has clearly adopted the theory, that the emotional as well as intellectual manifestations, have their separate organic seat; and Brodie and other psycho-physiologists imply the same belief, which is foreshadowed with no vague significance, in the universal popular expressions, the *head* and the *heart*. The reasoning of Dr. Carpenter upon this point is evidently insufficient; in the assumption, especially, that every emotion must have an *object*, the conception of which, and the idea of pleasure or pain related to which, is indispensable to constitute it a *motive* power. All psychologists have, with Falret, perceived and admitted the occurrence of melancholy, which confers its own tinge upon *all* objects, needing no idea, or set of ideas, to sustain its emotional perversion; and the same is true of mania of self-exaltation, in many instances, and even of eroto-mania. The unquestionably *active* or *imperative* nature of emotions is equally conclusive. The modern theory of *mania sine delirio* can only find a physiological basis in connection with such a view; and, notwithstanding our deference for the eminent physiologist named, we cannot doubt its final establishment.

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* Forty-first Annual Report on the State of the Asylum for the Relif of Persons deprived of the use of their Reason. Philadelphia, 1858.

Chapter VI. of the *Manual*, comprising one hundred and thirty-nine pages, is occupied with the full and careful descriptive history of the dif-

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* *Principles of Human Physiology*, last edition.

[illegible] forms of mental disease. The order of sequence chosen by Dr. Tuke, is as follows: idiocy; insanity; cretinism, and imbecility; dementia; delusional insanity; melancholia; emotional insanity; mania; and puerperal insanity. The section upon emotional insanity alone fills forty pages, and is an admirable résumé upon the subject, being illustrated amply with cases authenticating all the points asserted by the authors of this work, in common with most other psychologists since Pinel and Prichard.

The special forms of moral or emotional insanity treated of by Dr. Tuke are, homicidal mania, suicidal mania, kleptomania, erotomania, pyromania and dipsomania.

The omission of pyromania from the list, as proposed by Drs. Tuke and Bucknill, would be desirable; but the clear description given of dipsomania, or oinomania, we look upon as highly important. Dr. Hutcheson was among the first to call attention to this destructive and too frequent form of disease; one which requires arrangements for its special treatment, especially where, as in some parts of this country, a not easily explained or justified policy excludes all, or nearly all of its victims from model lunatic asylums. Hutcheson has well described, as quoted by Dr. Tuke, three forms of dipsomania; the acute, the periodic, or paroxysmal, and the chronic; all characterized by the essential feature of *irresistibility.* This is necessary to distinguish the true cerebro-mental disease from the mere vice of intemperance; although the latter may, with or without hereditary tendency, become the source of the former. The only case of *chronic* oinomania which Dr. Hutcheson knew to be completely cured, had required for the purpose two years of constant seclusion.

In regard to emotional derangements, generally, the whole tendency of modern observation and induction has been, to increase the importance of their place in psychical pathology. Even Dr. Mayo, who, with Heinrich and Leubuscher, is opposed to the theory of moral insanity, and insists upon the "intellectual criterion," yet claims to have early pointed out that the first indications of insanity are usually moral. Forbes Winslow, and Bucknill have elaborated the proof of this proposition very fully; making it clear, that, in a very large proportion of cases, the intellectual derangement is secondary; that emotional disorder, without impairment of the reasoning powers, occurs not unfrequently, while disorder of the intellect, without emotional perversion, is decidedly uncommon. The term "moral" insanity is, nevertheless, subject to both metaphysical and practical objections; clumsy as the word may be, therefore, we are glad to see the permanent adoption of that of "emotional" (although hardly better than "impulsive") by the authors of the *Manual.* It would be, perhaps, not without some advantage, if an extended alteration of the corresponding nomenclature were made to reach the conventional phrases of law and common intercourse; as *names* are *things.* If "*non compos mentis*" be retained in the old signification of insanity, as a derangement of the intellectual manifestations, it would be equally correct, and might tend to distinctness of idea, to designate as *non compos animi* one who, without essential intellectual disorder, has lost the control of the will over his emotional impulses.

The statistics of insanity occupy the concluding chapter of Dr. Tuke's portion of the volume before us.

The greatest obscurity still rests upon the *causes* of mental derangement. Dr. Tuke, dividing them into *predisposing* and *exciting* causes, gives great emphasis to hereditary transmission among the former. Esquirol and Guislain traced it in one-fourth of the cases examined into. Michéa raises the proportion to more than one-half. At the York Retreat, in forty-four years, hereditary predisposition was traced in nearly one-third. Dr. Brigham, at the New York State Lunatic Asylum, Utica, records its ascertainment in 315 out of 1,181 patients.

Dr. Leubuscher, of Berlin, has pointed out the especial transmissibility of the lower forms of mental disease, as imbecility, and of the various forms of depression. We incline to think that enough notice has not been taken by pathological writers of the *metamorphoses* which a transmitted tendency to cerebral disease, like other hereditary taints of system, many occasionally undergo ; as, for instance, where insanity in several members of one or two generations, is followed by early death from meningitis or convulsions, or paralysis, in another ; or *vice versâ*. We have seen this kind of sequence too often not to be convinced of its practical interest as a pathological fact.

In regard to the *sexes*, after reviewing various authorities, Dr. Tuke concludes that while it is proved that, in general, fewer women become insane than men, a difference in liability is not yet established, as the former are less exposed to the causes of mental disorder.

As to *age*, the experience of the "Retreat," from 1786 and 1840, proves that the greater number, one-third of all the cases there admitted, have been attacked between twenty and thirty ; while each subsequent decennial period exhibits a gradually decreasing proportion. Other statistics, including those of the Bloomingdale Asylum, New York, are quoted, all favoring the same result, except those of Esquirol, at Charenton, whose conclusion appears to be, that between thirty and forty is the period of greatest proclivity to derangement. The admissions under twenty years of age are much more numerous in the New York Asylum than in those of England and France. Is this among the evidences of precocious development in "Young America?"

Esquirol, Guislain, and Parchappe have shown that insanity commences much more frequently in summer than in spring. Yet, "we do not, as might have been expected, find more insanity in hot climates than in cold." Dr. Webster asserts that it is much the most common in cold countries. This is an example of the difficulty of analyzing causation upon so complex a topic.

Dr. Tuke assents to the conclusion drawn by Prichard and others, that the condition of married persons is, *cæteris paribus*, much less favorable to the excitement of madness than that of celibacy. He adds, however, very properly, that one reason why celibacy and insanity are so much connected, is, that the mental peculiarities of patients, often exhibited in years before admission to asylums may have prevented marriage.

The *exciting* causes of derangement are, however, the most difficult of determination. M. Parchappe, after a very extensive inquiry, asserts the very large predominance of moral over physical perturbating influences: the former being, in his statistics, in the proportion of 612 to 364. Pinel and others have arrived at the same opinion; and the statistics of sixteen asylums in the United States give a result of two-thirds of the cases from supposed moral causes. Among these, domestic troubles, or grief, always stand first upon the list; next, religious anxiety or excitement; then, disappointed affections; fourthly, political and other excitement; fifthly, fear and fright; lastly, excess of study, wounded self-love, etc. Of physical causes, intemperance holds the foremost place.

The proportion of *recoveries* has been shown, by Dr. Thurman and others, as quoted by Dr. Tuke, to be from forty to fifty per cent. of those admitted to asylums for the insane. But to this must be added the consideration of the proportion of *relapses.* At the Retreat, Dr. Tuke was able to ascertain that 65.6, or two out of three of those who had recovered, had subsequent attacks. In round numbers, therefore, it may be stated, that "of ten persons attacked with insanity, five recover, and five die, sooner or later, during the attack. Of the five who recover, not more than two remain well during the rest of their lives. The other three sustain subsequent attacks, during which, at least two of them die."

Dr. Farr's statistics are especially appealed to in regard to the *mortality* of the insane. In mixed asylums, not restricted to any class of society, this is estimated as from seven to nine or ten per cent. It would appear that, whatever influence insanity may have in shortening life, while in its acute stage, it loses this tendency when it assumes the chronic form: incurables often living longer than the sane.

When we remember that statistics of insanity have been kept, even in Great Britain, only for about twenty years,* the above mentioned results may be considered as decidedly important; but a much greater accuracy in detail may be hoped for, hereafter, upon some subjects.

We come next to the valuable chapters upon the Diagnosis, Pathology and treatment of Insanity, contributed by Dr. Bucknill; a considerable part of which we recognize as having been already published, in the *Asylum Journal*, and *Brit. and For. Medico-Chirurg. Review.* It would be impossible, by any brief analysis or series of quotations, to do justice to the acumen and assiduous devotion to his subject displayed by the author of these essays. Without speaking for specialists, we are sure that no others will elsewhere find, in the English language, any exposition, especially of the pathology of cerebro-mental disorders, so rational, and so much in harmony with the principles of modern pathological science.

Let us return for a moment to the *definition* of Insanity. Forbes

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* Enumeration of the Insane was commenced in Norway in 1828.

Winslow, and Sir H. Holland assert the impossibility of defining it. The former, in treating of medical evidence in criminal cases, says, "above all things, the medical man should avoid defining insanity." Yet, if the question be, "Is the prisoner at the bar insane?" does not the variable significance of the term require, that, for mutual understanding between the court and the witness, each should be aware of the precise meaning attached to it by the other?

Dr. Bucknill's preferred definition of insanity is, "a condition of the mind in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts, have, separately or conjointly, been produced by disease." Elsewhere, he abbreviates this into "disease of the brain affecting the mind;" and, incidentally, again, forgetting his *somatic* postulate, "disease of the mind, that is insanity."

Dr. Tuke observes, that we cannot well define love or anger, and yet every one knows what they are, and so it is with insanity. A reference to a common standard is thus implied. The insane man is out of the harmony of human existence. A comparison either with his former self, or with the society around him, makes this manifest; but, when the former is impracticable or difficult, the latter suggests itself to all. The French term *aliéné* is very significant. Language is the medium of communication between those of the same community; as, therefore, foreigners are known at once by mutual unintelligibility, so the want of correlation, of reciprocal sympathy, by means of language, manners and actions between the insane and the sane, makes them known as such. The Greeks had a rule of art, that all passion, represented or described, must be true; and that that alone is true, which appeals with success to the common consciousness. A similar rule may be easily applied with regard to insanity; perhaps even without adhering to Dr. Bucknill's so strongly insisted upon requisite, of proved bodily disease. Practically, a man is insane, who is not master of himself; whether this be from the brief madness of anger, the longer fascination of spirit-rapping, or the asylum-treated mania or melancholia; and, if troublesome, society does not necessarily inquire into the etiological history of his brain and mind. The question is more direct. A learned Baron of the Exchequer (quoted in the London *Times*), was pressed by the bold assertion, a favorite one with Dr. Haslam, that *all men are mad;* he replied, that, if mad, we must do the best we can under the circumstances. There must be a kind of rough understanding as to the forms of lunacy which cannot be tolerated. The most essential item, in the commonly accepted use of the term insanity at the present time, appears to be, *the loss of the control of the will over the actions and character of the individual.*

The three theories of insanity, which still divide psychologists, are well described by Dr. Bucknill, in his "Essay on Criminal Lunacy" (named at the head of this article), as the *somatic*, the *psychic*, and the *somato-psychic*. The spiritual or psychic theory has for its advocates, amongst others, in Germany, the distinguished Heinroth and Ideler; in France, Leuret; in England, Dr. Mayo, and, by implication at least, Lord Brougham. The somatic or materialistic is represented by Freiderich in Germany, and by the phrenologists generally. The somato-psychic or mixed theory, which recognizes the existence of mind and will, while it acknowledges the brain to be the seat of the mind and the instrument of volition, is taught by Groos, Blumröder, and others on the Continent of Europe, by Barlow, Forbes Winslow and other psychologists of Great Britain, and is, we believe, the accepted doctrine in this country.

We are in some doubt, however, where to place Dr. Bucknill. In the Essay just alluded to he gives us the impression that he belongs to the class last described, with these words (p. 15):

"Fortunately, there is a middle course. The psycho-somatists find in the liability of the cerebral instrument to disease, a reasonable basis for the irresponsibility of the insane; and, in the freedom of the spiritual will, a just ground for the responsibility of the sane."

But, when we turn to p. 389 of the "Manual," we find the following:

"Mr. Paget supplies (in a passage quoted) arguments for a strictly cerebral view of mental power, which go deep to the root of the matter. If he repudiates the conclusions to which his reasoning necessarily tends, it may be owing to some lack of confidence in his audience. He may think that to teach the identity of mind and of cerebral function, is mental food too strong for the College of Surgeons. As Mephisto exclaims:

'Das Beste das du wissen kannst
Darfst du den Buben doch nicht sagen.'

"But his teaching will strengthen the mental digestion, and after a while stronger diet may be ventured upon."

In a review, also, confessedly from his hand,* Dr Bucknill endeavors to convict Dr. F. Winslow of inconsistency, in having avowed himself a *spiritual physiologist*, and yet assenting to the truth, that the *manifestations* of mind are implicated and disordered in and by diseases of the brain. Unlike Dr. Bucknill, the "mental chemistry which unites these apparently incompatible elements" appears to us sufficiently plain; he has himself given us the best elucidation of it, in the essay above quoted. Are we to infer that he, too, has adapted his diet, with care, to the palates of the Irish College of Surgeons, from whom his essay received so honorable an award? If so, we cannot but wish that the intelligence of medical fraternities, and the candor of their teachers, might be better adapted to each other without depriving us of the nutrition of undisguised scientific truth.

Leaving philosophical questions, however, and following Dr. Bucknill into his more congenial sphere of strictly cerebral pathology, we find his platform thus defined:

"*The physiological principle upon which we have to build a system of cerebral pathology is, that mental health is dependent upon the due nutrition, stimulation and repose of the brain; that is, upon the conditions of the*

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* *Brit. and For. Medico-Chirurg. Rev.*, Oct. 1855.

exhaustion and reparation of its nerve-substance being maintained in a healthy and regular state; and that mental disease results from the interruption or disturbance of these conditions."

The following remarks are also especially deserving of attention.

"To us it is not less an ultimate fact, that certain poisons interrupt the functions of certain organs, than that atrophied organs cannot discharge their functions with vigor; and, hence, the rational estimate of circumstances which have taken place during life, is not less important in the investigation of pathological lesions than post-mortem observations. The admirable precision which microscopic observation and chemical analysis have of late years acquired, has tended greatly to distract the attention of physicians from the importance of rational pathology. Now-a-days, all lesions which cannot be calculated in test-tubes, or demonstrated under object-glasses, are apt to go for nothing; but this kind of pathology has hitherto done little towards the elucidation of mental disease. The reason of this appears to be as follows: The pathological conditions of insanity almost always involve the whole of the cerebral hemispheres. A general condition of the cerebral convolutions capable of producing an amount of structural change distinguishable under the object-glass of the microscope, would scarcely be consistent with a continuance of life."

A careful distinction is made between the nosological and the natural or pathological classification of cerebral affections. For convenience, the delirium of fever, of cerebritis, etc., are excluded from the list of forms of insanity; but the line drawn between phrenitis, for example, and acute mania, should not be, as it has been by some psychopathologists, made one of contrast rather than gradation. With Sir Henry Holland, our author considers that great profit may be gained by the student of insanity in giving attention to the causes and signs of delirious thought and perverted feeling, in all classes of bodily disorder where they are observable. He will thus be prevented from taking the narrow view which ascribes all forms of mental derangement to a single pathological state; and will be prepared to admit the broad principle, "that insanity may be occasioned by any and every pathological state which is capable of taking place within the substance of the brain."

An excellent résumé of the leading facts in the morbid anatomy of insanity, as at present observed, is thus quoted from M. Parchappe:

"1st. Monomania. In this form of insanity no pathological change is found to exist in the brain, and the probable cause is to be sought in the organic predominance of some portion of the brain, in consequence of its size or activity. 2d, acute mania, and acute melancholia. In these forms of insanity, the alterations found in the brain, to a certain extent resemble those of inflammatory affections of the organ. They are hyperæmia of the pia mater, and of the cortical substance, partial injections of the subarachnoid tissue, punctiform injection, and occasional softening of the cerebral substance; it is rare that the meninges are found extensively thick and opaque. The above alterations are usually more decided in acute melancholia than in acute mania. In sympathetic mania, that is, mania occasioned by the irritation of some part of the distal nervous system, no anatomical changes may be discovered if the examination is made in the early period of the disease; but, after a while, the brain passes from the state of physiological excitement into that of pathological change, and then the above alterations may be expected to be found on examination. 3d. Simple chronic mania. In this form of insanity, the aspects of the brain are altogether different from those which prevail in the acute paralytic (?) forms of insanity ; they are atrophy of the convolutions, with loss of color and induration of the cortical substance, or of the medullary substance, or of both; serous infiltration of the pia mater, and dropsy of the ventricles, connected with, and consequent upon, general atrophy of the brain. 4th. Paralytic insanity (general paralysis).—In this the essential alteration consists in softening of the middle layer of the cortical substance ; very frequently, also, the pia mater is thickened, adherent, and infiltrated ; in the acute form, the cortical substance is hyperæmic and deepened in color, and the pathological appearances of acute mania are present. In the chronic form, the cortical substance has lost color and become thin; atrophy of the convolutions, and the appearances of chronic mania are present. 5th. Epileptic insanity.—In this the alterations resemble those of simple chronic mania."

Dr. Bucknill places especial emphasis upon the evidence that, in the more acute forms of mental derangement, *hyperæmia*, and inequality in the circulation of different parts of the encephalon, caused often by previous or localized inflammation, is an important condition. He is careful to distinguish this hyperæmia, in description, from that of inflammation; notwithstanding that it may produce "transparent exudations of serum, and interrupt the normal endosmotic motions;" the sign of difference being, that it "does not occasion the fibrinous and purulent exudations which are found in cerebritis."

The disturbance of circulation alluded to, along with local or general "irritability, or that state in which slight causes of nervous action produce great effects," constitutes the condition which, as it appears in various organs, has been, time out of mind, very unfortunately, designated as "chronic inflammation." Not intending to enter now upon this battle ground of pathological theory, we may simply refer to the writings of Handfield Jones for the justification of the view, that the term "chronic inflammation," as thus misused, is a disadvantage to our nomenclature. Its removal, however, or corrected employment, would be no more important than the exclusion of the view of Virchow, alluded to by Dr. Bucknill, which includes "all disturbances of nutrition, and even all atrophies and degenerations, under the term inflammation;" an arbitrary dictum, which, but for the authority of its source, would be pronounced an absurd and injurious perversion of the use of language.

It is to be regretted that there is no single term which will properly designate the state above spoken of, more fully and clearly than that recently in common use, as applied in the case of irritable stomach, irritable conjunctiva, irritable uterus, spinal irritation, and, we might go farther than Dr. Bucknill in adding, especially in reference to periodical or paroxysmal mania or melancholia, *irritable brain.* It is a state consisting especially in enlargement, with relaxation, yet with great erectility of the blood-vessels of an organ, with a heightened susceptibility to all exciting agencies, the reaction upon which is often perverted, as well as excessive and painful : the most familiar example of which is seen in that condition of the optical apparatus which, even in the absence of granulation or exudation, is yet commonly called *chronic ophthalmia.* Were not the word *hyperæmæsthesia* too long for use, it might serve a convenient purpose.

The most conspicuous labors of Dr. Bucknill, however, in connection with cerebral pathology, have been those devoted to the study of *atrophy* of the brain in insanity. His first publication upon this subject was in 1851 ; but a fuller account of his investigations appeared in the *British and Foreign Medico-Chirurgical Review*, January, 1855, giving the tabulated result of the measurements and weights of sixty-four brains, examined for that special purpose. The subject of the specific gravity of the brain had been, in the mean time, elaborated by Drs. Sankey, Oliver and others. The inference from these data is an extremely interesting one.

"The commonest appearance met with in the brains of insane persons is that of *shrinking.*"

"In chronic mania, dementia following mania, and primary dementia, the amount of cerebral atrophy may generally be calculated upon the enfeeblement of mental power."

The apparent and exciting causes of this atrophy are inferred to be—1, poverty of blood ; 2, derangement of the normal relation between the nervous and vascular systems, as *e. g.* by disease of the cerebral vessels ; 3, the molecular change produced by blows or violent concussions; 4, inflammation, or long-continued congestion; 5, want of rest to the brain, and especially of *sleep.* Want of refreshing sleep, Dr. Bucknill believes to be the true origin of insanity dependent upon moral causes.

The existence of morbid excitability in an organ suffering under defective nutrition, is not at all peculiar to the brain. And, as our author remarks, "nothing is more common than for an atrophied brain to suffer from temporary hyperæmia."

The facts collected in regard to the specific gravity of the brain, are sufficient at least to prove the existence of great alterations in the substance of the cerebrum, in connection with mental disorder. Increased specific gravity of the brain, observed especially in epileptic cases, has been supposed by Dr. Bucknill to depend probably upon deposit of albuminoid material. Diminution of density, on the other hand, he refers to fatty degeneration, or substitution ; and this view has received confirmation from the researches of Henle and Meckel, showing the occasional conversion of the contents of the brain-cells into cholesterine, forming what they call violet-fat (speck-violet), from its blue reaction with iodine and sulphuric acid. Besides small plates of cholesterine, Dr. Bucknill has seen, in degenerated brain-tissue, peculiar bodies not elsewhere described; being in shape like the blade of a lancet, pointed at both ends, and about three or four times the width of a nerve-tube; reminding the observer of the raphides of some plants. In what has been called *hypertrophy* of the brain, Dr. Bucknill considers as most probably correct, the view of Dr. Handfield Jones; that, instead of a real hypertrophy of normal tissue, the increase consists in an insterstitial fibro-albuminous deposit. Dr. Bucknill uses the terms *positive* and *relative* (quantitative and qualitative?) atrophy, to distinguish between this change and the shrinking of the brain above mentioned. There is great interest in the exemplification thus obtained, of the analogy prevailing, in such important respects, between the pathology of the highest centre of the nervous system, and that of the glandular and other viscera, of lower function, throughout the body.

In regard to partial insanity, or monomania, without appreciable change of the brain, which presents the greatest difficulty to the somatic theory, our author writes as follows:

"When the disease first exists, it is attended by pathological states of the cerebral vessels. A morbid condition of the cerebral organization is occasioned, attended by the phenomena of insanity. After a short time the vessels recover their tone, the brain is nourished, and its size maintained as a whole. But the original balance of its organs is not regained; their nutrition having been impressed in the type or mould of their diseased state. The result is chronic mental disease, of a nature which leaves behind no pathological appearance."

The state of the *fluids* of the body in insanity has not been altogether neglected. Hittorf, Erlenmayer, and Michea have investigated the condition of the blood; and Sutherland, especially, that of the urine. In regard to the blood, the results are too incomplete, as yet, to be of much value. The inductions which Todd, Simon, and others have of late rendered so important in connection with the "humoral pathology" of various nervous affections, must, we anticipate, find their place, hereafter, along with the demonstration of changes causing, or caused by, some forms of mental derangement. Dr. Bence Jones has examined carefully the state of the urine in phrenitis, delirium tremens, and general paralysis. Our readers are probably familiar with his results, as regards the altered proportion of the phosphates. Dr. Sutherland ascertained that, in four out of five cases of acute mania, the relative amount of phosphates was above the mean of health. In acute dementia, they were remarkably deficient; their quantity being lowest when the mental faculties were most feeble. In general paralysis also, the deficiency of phosphates was very great. In chronic mania and chronic dementia their amount was below the average in every case but one. The reaction of the urine was found by Erlenmayer to be alkaline in most cases of recent mania. Dr. Sutherland found it acid in much the larger number of instances of acute and chronic mania, but alkaline in twelve out of twenty-five cases of general paralysis.

The concluding chapter of the "Manual," upon the Treatment of Insanity, is evidently worthy of the subject, and highly creditable to its author. As, however, the first commandment enjoined upon all private practitioners (and with excellent reason), makes it necessary to send every lunatic patient at once to a lunatic asylum, we may content ourselves, at present, with commending the study of this chapter to all requiring information upon its topics. While subdividing the modes of treatment of insanity into the hygienic, the moral, and the medicinal, it is obvious that the basis of Dr. Bucknill's therapeutics is *physiological;* regarding the brain as an organ, whose morbid states demand the same relative principles of care and management, with a view to its repose, nutrition, circulation, etc., as any other organ ; what is commonly called "moral" treatment, in fact including much that is merely *hygienic* or rational, in the simple adaptation of circumstances to the exhausted, irritated, or disturbed condition of an important viscus. At the same time, very full justice is done by the author to the importance (especially after the early and violent symptoms of mental disorder have subsided) of *individualized* treatment ; that is, of constantly impressing upon the insane the beneficial influences of the character of the sane, in intercourse with them. None can fail to see that in this, the conjoined assistance of all who attend upon his patients, is essential to the success of the medical officer ; and that, for such a purpose, the most humane and sympathetic minds are often more fully available, than the "tall and powerful" attendants, upon whose presence Gardiner Hill insists.

We should be glad to begin, instead of closing an article, with the notice of Dr. Bucknill's admirable "Essay on Criminal Lunacy," of which, however, this is the second edition ; the dedicatory letter to Lord St. Leonards being dated in 1854. Very little alteration has taken place since that year in the direction of reform; since, as another writer has observed, "the law always drags heavily at the heels of general intelligence." The subject is one of great interest to both the medical and legal professions, as well as, in fact, to every citizen; as it concerns the very foundations of law and justice. We pause, therefore, long enough to remark upon the quotation, with approval, in the essay, of an eloquent passage from Cousin, of which the essence is expressed in these sentences :

"Justice is the true foundation of punishment ; personal and social utility is only a consequence."

"*Punishment is not just because it is useful* as a preventive or a corrective ; but it is *useful* in either or both these ways, *because it is just*."

We are satisfied that this is not the principle of modern jurisprudence; which even reverses the dictum, holding, that society has the right to administer punishment, *not because* it is *deserved*, but *because* its administration may be of *use*, by preventing the repetition of crime. This is sustained amongst others of ample authority, by Lord Denman * and Lord Brougham.† It belongs to the progress of our age. Says Prescott, the historian : ‡

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* Answers of certain judges, etc., 1847. † *Hans. Par. Deb.* lviii. 728.

‡ *Hist. of Mexico*, vol. i. p. 169.

"It is only with increasing civilization that the legislator studies to economize human suffering, even for the guilty; to devise penalties, not so much by way of punishment for the past as of reformation for the future."

We are at present in an important era of transition in regard to the legal relations of insanity and crime. The old tests of "delusion" and of "knowledge of right and wrong" having been proved to be altogether insufficient, much that is now in the crude state of opinion remains to be assimilated and organized into law and precedent. The first need is, that lawyers and doctors should be placed in harmony upon the subject of moral insanity. Let us hear a few words upon this topic from one who holds a high position in connection with psychological medicine: *

"The plea of insanity is often a most righteous one, and altogether too humane in its character to have its just influence jeopardized by being used by those whose only claim to be shielded by its benevolent influences consists in the atrocity of their offences, or the enormity of the frauds they have perpetrated on the community. Gigantic frauds and startling crimes do not constitute insanity, nor are they to be regarded as symptoms of the disease; and if our courts should once begin to permit such doubtful associations, the sound common sense of the community, it is to be hoped, will soon decree, that for that form of insanity—no matter whence it derives its title—the most efficient treatment will be found in some well conducted penal institution."

No principle, it would appear, is more important to have speedily settled, than that the burden of proof, in criminal cases, rests altogether with those who bring forward the plea of insanity; and that, in the words of Dr. Forbes Winslow, "the evidence of moral insanity ought to be clear and convincing." A doubt here should weigh rather *against* than for the prisoner. This is the view stated clearly by our American judges, Lewis, Edmonds, and Whiting; although some of the medical jurists and psychopaths, as Ray and the younger Pinel, lean toward a contrary opinion.

It is perhaps equally necessary, however, to recognize with Drs. Mayo and Winslow, the existence of some responsibility, not only to conscience but to law, on the part of many insane persons;† although it be, in most cases, what Pinel designates as "une *attenuation* de responsabilité." The author of the "Essay" before us agrees fully with the writers above named, in urging the want of an institution or department, "intermediate between the prison and the madhouse," in which criminal lunatics may be confined, and subjected to appropriate discipline—a want which has been felt in England, and even alluded to in Parliament since 1807. Dr. Winslow, at the same time, in his excellent "Lettsomian Lectures," and in other works, has taken a most humane view of the diminished liabilities of the insane, as the following passage, appropriate to our present subject, will show:

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* Dr. T. S. Kirkbride: Report of Penn. Hospital for the Insane, 1856.

† See Barlow on man's power over himself to control insanity. Lea and Blanchard, 1847.

"I affirm, that in estimating the amount of punishment to be awarded, it is the solemn duty of the judge, not only to look at the *act itself*, but to consider the *physical* condition of the culprit—his education, moral advantages, prior social position, his early training, the temptations to which he has been exposed, and, above all, whether he has not sprung from intemperate, insane, idiotic, and criminal parents."

Tried by these tests, what crime, or rather what criminal will be left for the gallows? Truly it has been said that we have no "mentometer" with which to judge of human responsibility; and this subject cannot even be touched upon, without our expressing the opinion, that, on the ground of expediency alone, it is time for mediæval punishments to be abolished in civilized communities; the more especially, since their repulsiveness renders any punishment for capital offences dangerously uncertain. Dr. Bucknill asserts that it is much a matter of chance in Great Britain whether a man tried for murder will be hung, incarcerated for life at Bethlem, or acquitted by the jury from horror of capital punishment; and we are not sure that society is any safer here.

A crying want, also, emphatically treated of in the essay of Dr. Bucknill, and no less palpable in the United States, is that of a more competent tribunal than an ordinary jury, with medical witnesses summoned *for one or the other side*, to decide upon the sanity of a prisoner. They do those things more rationally in France; where *experts* are selected, who not unfrequently occupy *months* of daily attention and intercourse in determining and recording evidence of the mental state of an individual.

Hastening, however, to conclude these observations, we may sum up in a few words, what, from the luminous exposition of Dr. Bucknill and of others, we conclude to be the great desiderata at the present time in the jurisprudence of crime and insanity.

1. That juries should be restricted to the trial of the *fact* of the commission of crime; the question of the sanity or insanity of the prisoner being left to a commission of *experts*.

2. That all homicides acquitted on the plea of insanity should be, without exception, confined for life in an appropriate institution selected by the court.

3. That capital punishment should be abolished in all communities provided with the means of secure and permanent imprisonment.

4. That careful classification should be made (Wharton) of, 1, *sane* convicts; 2, insane *malignant* convicts; and 3, *innocent* insane convicts.

5. That special provision should be made for the separate detention, management, and discipline of insane criminals or criminal lunatics. In the words of a late admirable writer upon the subject, "the offence (sane or insane) demands, for the safety of society, that the offender should be securely secluded;" the diagnosis of his cerebro-mental state being then, however important, a secondary question; one which will assume, it may be, a still less relative magnitude, unless in a psycho-pathological view, when the science of the alienist, and the prac-

tice of the forum and the bench, are brought into full harmony with that humanity, which always pre-indicates the final result of research into truth. H. H.

Philadelphia, Sept., 1858.

Art. X.—*Experimental Researches relative to the Nutritive Value and Physiological Effects of Albumen, Starch and Gum when simply and exclusively used as Food.* By William A. Hammond, M.D., U.S.A., 1857, pp. 79. (*A Prize Essay of the American Medical Association for* 1857.)

Dr. Hammond's investigations being based upon the law of waste and supply, he opens his subject by laying down his views on this point, "From the first moment of existence to its termination two processes are constantly progressing in the healthy organic being. The first of these—*nutritive*—is that by which the several tissues of the body are primarily formed, and subsequently developed and nourished: the second—*decay*—is the direct antagonist of the former, and through it those portions of the organism which have performed the office in the economy for which they were assimilated, are decomposed into simpler substances and after undergoing continued metamorphosis, are eventually excreted from the system. The continuation of these forces constitute life, the cessation of either of them, even for a limited period, induces death."

This is a judicious statement of the doctrine of maintenance, and contrasts favorably with Mr. Paget's views of the same subject as contained in the first volume of his Lectures on Surgical Pathology, wherein he states that, "It may be proved, partly by demonstration and partly by analogy, that each integral, or elemental part of the body is formed for a certain natural period of existence in the ordinary condition of active life, at the end of which period, if not previously destroyed by outward force or exercise, it degenerates and is absorbed, or dies, and is cast out, needing in either case to be replaced for the maintenance of health." Mr. Paget, however, failed to demonstrate this.

It is a magnificent idea, that of a single universal principle underlying, containing and controlling whole systems of subordinate principles. We know of but one principle that bears any, the most remote analogy to this, and it is confined to a single system—the nervous—but the doctrine here advocated embraces all to the last molecule, an illusion that must fade before the advance of science.

Dr. Hammond's object in conducting his investigations was to contribute to a fuller understanding of the effects of the different classes of food, and to indicate their value as aliments. To this end he confined himself during limited periods of time successively, to an exclusive diet of albumen, starch, and gum, leaving sufficient intervals of time between these feasts. Having selected the first as the representative of the protein compounds, the author makes the following remarks on the physiological relations of these substances—that is to say, of nitrogenous food. "It is an established fact in physiology, that nitrogen is essential to the formation of all the organized tissues of the body. The experiments of Régnault and Reiset have definitely determined what had previously been arrived at by Boussingault in another way, that this substance is not absorbed into the system from the atmosphere by respiration, but that there is actually, on the contrary, a loss of nitrogen to the organism from the lungs. It must therefore be entirely derived from the alimentary substances ingested in the stomach. It results, therefore, that the food, to be fully available for the requirements of life, must contain nitrogen in its composition, and it was until recently contended by many physiologists, that the nutritive value of aliments was to be directly measured by the proportion of this element entering into their constitution. It is now, however, admitted that in order to conduce to nutrition of the tissues, the nitrogen must be introduced in the form of protein."

Is the reader, then, to infer that nitrogen is the grand essential in the organization of the tissues, and that protein is merely a vehicle used for its transmission? Certainly not! Dr. Hammond, addressing a learned body, does not descend to particulars; but we, speaking to the young as well as to the experienced practitioner, must be more definite in our statments, and we would here remark, that nature in the formative process deals mainly in compound bodies; and, still speaking generally, confines synthetical operations to the retrogressive series. Protein (albumen) containing nitrogen as a part of its constitution, and containing also such other simple and compound bodies as are required by the tissues and secretions—is the nutritive material *par excellence.* Nitrogen is a constituent of protein, but it is no more an essential than any other element entering into its composition.

We mention this merely to guard against misconception.

The albumen used in these experiments was obtained from bullock's blood by boiling. "It was well washed to remove, as far as possible, all extraneous matters;" but of course simple washing would not yield pure albumen. We are not, therefore, to expect either very speedy or very marked results. Distilled water was the only fluid taken during the investigation.

No decidedly ill result appeared until the fourth day, when febrile reaction occurred, attended with abdominal pains. Diarrhœa supervened and on the tenth day the debility became extreme, and the experiment terminated. The pulse did not at any period rise above 100. The decrease in weight was about five pounds. Confirmation is added to the fact, now universally admitted, that albuminuria may exist independent of disease. Dr. Hammond remarks, "The present researches show that albuminuria is produced by the continued use of highly albuminous food in large quantities, and that it was not (so to speak) until the system was saturated with albumen, that it made its appearance in the urine."

The author draws the following conclusions:

"1st. That the proportion of nitrogen eliminated by the kidneys to that absorbed into the circulation, is, in man, much less than is generally supposed.

"2d. That even when the body is losing weight from the oxidation of its fat, the excess of nitrogen over that escaping by the kidneys is retained in the system, both in its original form and under that of other combinations."

Dr. Hammond's next experiment was with starch. Having determined that substances isomeric with starch exist as constituents of certain tissues in man and other animals, he concludes that amylaceous substances are not peculiar to vegetables; but in the next sentence he informs us that because starch does not contain nitrogen, it cannot contribute to the nutrition of the tissues. The chemical physiologists, however, are of the opinion that the value of food is not solely dependent on the presence and proportions of the chemical elements which enter into its composition, and this observation finds confirmation from our author, who states that the value of starch rests on its heat-producing power; and, he adds, "that its easy digestibility renders it superior to fatty substances, although the latter contain a greater proportion of combustible material."

Leaving the question of digestion in abeyance for the present, we pass to the rapid consideration of its results with starch. The prepation used in this investigation was that familiarly known as corn starch. Now, in our opinion, the author might almost as well, and with much less inconvenience to himself, have lived upon potatoes. The manufacturers of this article justly recommend it for its nutritious qualities, and doubtless they will quote these experiments as confirming their statement.

This diet was, as in the case of albumen, continued during ten days, the fluid used being distilled water.

As we might reasonably expect, the pulse did not exceed its normal frequency ten beats during the experiment, and there was a scarcely appreciable loss of weight.

On the fourth day, debility and disturbed sleep occurred; torpor of the bowels followed, attended by febrile reaction, water brash, and head-ache. Boils made their appearance on several parts of the body, and one or two scratches on the hand became painful and showed a tendency to inflammation and suppuration.

Palpitation of the heart and oppressed respiration became very troublesome symptoms, to which Dr. Hammond is, perhaps, predisposed by previous disease—he stating in the introduction, that some few years previously he had been troubled with symptoms indicative of disease of the heart—from which he had, however, entirely recovered.

Sugar appeared in the urine.

In the blood, albumen was diminished, and fibrin increased in quantity.

In relation to fibrin, Dr. Hammond remarks: "So many different views of the value and character of the fibrin of the blood are held by physiologists, that I merely state the fact of its occurrence in this fluid in increased quantity after farinaceous diet without attempting to account for it. Whether fibrin is a substance of the ascending or descending grade of metamorphosis is as yet far from determination." Let us look at the conditions. The diet was not free from, but it was deficient in protein and the usual inorganic constitnents of food. Now, suppose fibrin to be of the descending grade, and to result solely from the disintegration of the tissues ; how are we to account for the equable pulse and the undiminished weight of the body ; a moment's reflection will show that this view is simply contradictory. But no such difficulty occurs when we regard fibrin as a transition substance formed from albumen by oxidation, which body, not being supplied as freely as required, and being, if anything, more rapidly oxidized than usual, owing to the increased frequency and force of the respirations (with undiminished capacity of lung and a low temperature of the air), must have been rapidly converted into fibrin ; and hence the relative figures. Dr. Hammond's final experiment was with gum arabic and distilled water. In four days the pulse rose from 80 to 108, and the loss of weight was also decided.

Hunger, colicky pains, and debility were experienced within the first twenty-four hours, and these symptoms rapidly increased. Febrile reaction set in, attended by soreness of the abdomen, and an impacted state of the bowels. Prudence forbade the longer continuance of the investigation, and it terminated with the fourth day. The consequent indisposition, however, lasted several days longer, and required great care in diet, etc.

The gum was found in the fæces.

From the *résumé* at the close of the essay, we select the third article, as being the nucleus of the whole investigation, and worth more than some octavo volumes which it has been our misfortune not only to buy, but read.

" 3. Either some other means than the urine exist for the elimination of nitrogen from the system, or the excess (over two-thirds) is retained in the organism, even when the body is rapidly decreasing in weight."

This essay gives evidence of learning and ability. Had the manuscript received from the body which indorsed it (the American Medical Association) the benefit of a matured experience (which the writer had a right to expect), in the form of friendly criticism, it would have been of more value to the profession, and to Dr. Hammond of greater worth, than the prize which was awarded to it.

In subsequent numbers we propose to notice some recent works bearing on certain points relating to digestion.

ART. XI.—*Critical Examination of all the recent Works relating to Infantile Pathology and Therapeutics; prepared for the* NEW YORK JOURNAL OF MEDICINE. By A. JACOBI, M.D., Physician to the Children's Department of the (Canal street) German Dispensary of the city of New York.

I. POPULAR WORKS.

1. *Kinderdiätetik. Eine Anleitung zur naturgemässen Pflege und Erziehung des Kindes.* Von MAUTHNER VON MAUTHSTEIN. Dritte Auflage. Wien, 1857, pp. 272.

Infantile Dietetics. Rules for the Proper Care and Education of Infants. By MAUTHNER VON MAUTHSTEIN. Third edition. Vienna, 1857, pp. 272.

2. *Kinder-Diätetik oder naturgemässe Pflege des Kindes in den ersten Lebensjahren, mit besonderer Berücksichtigung der noch dabei herrschenden Irrthümer und Vorurtheile.* Von ALOIS BEDNAR, Doctor, etc. Wien, 1857, pp. 275.

Infantile Dietetics; or, on appropriate care of the Child in its first Years, with particular Regard to still reigning Errors and Prejudices. By ALOIS BEDNAR, M.D., etc. Vienna, 1857, pp. 275.

3. *Den Deutschen Müttern und Vätern; ein Buch über das Werden und Wachsen ihrer Kinder als Schlüssel zu deren gesünderer Erziehung.* Von Dr. LEOPOLD BESSER. Frankfurt-a-M., 1858, pp. 344.

A Book, for German Mothers and Fathers, on the Formation and Growth of Children, being a Key to their sound Education. By Dr. LEOPOLD BESSER. Frankfort on the Maine. 1858.

4. *Education physique et morale des nouveau-nés, suivi de l'importance de l'allaitement pour la mère.* Par le Dr. J. GAUVENAU, médecin, etc. Paris, 1858, pp. 106.

On Physical and Moral Education of Newborn Children, with an appendix on the Importance of Nursing to the Mother. By Dr. J. GAUNEAU. Paris, 1858, pp. 106.

5. *The Mother's Handbook: a Guide to the care of young Children.* By EDWARD H. PARKER, M.D. New York, 1857, pp. 250.

THE majority of books on dietetics of infants do not form a part of the library of medical practitioners, who usually have neither time nor inclination to read whatever is written for the public in general. Now, we do not contend that all the numerous books published on this subject ought to be read by the profession, for the purpose of increasing their medical knowledge; for an exact acquaintance with physiological facts enables the medical man to draw his conclusions for himself. But there is good reason why every physician should read as many popular books on infantile dietetics as possible. It is only natural that the public should, in their selection of books written on a medical subject, mostly depend upon the judgment of their medical advisers; in this case, the physician is placed in the most favorable and agreeable position; he has not then to cure diseases, but to prevent them; not to act as doctor, but as medical friend and protector. Every educated physician has no difficulty in deciding what kind, and what amount of instruction may be safely recommended in the individual case; but the very fact, that the kind of instruction has to vary with education, position in life, and talent, should induce physicians to read as many popular works on dietetics as possible. What is most important is, that no works be selected in which anything is given not based upon incontestable scientific results; as nothing is more apt to confuse the mind, than discussions on scientific subjects not wholly decided upon. Whatever, then, is laid before the unprofessional public ought to be perfectly clear and intelligible. Therefore everything relating to pathological changes, and the cure of diseases, should not be a part of the work we refer to; when they are given, they are more than unnecessary, they are positively injurious, because subjects which require the student and physician years to thoroughly comprehend, will certainly not be readily understood by the popular mind. These preliminary observations were rendered necessary, that we might apply a uniform standard to the works under consideration.

Of the three first named works we shall say but very little, because we know of no translations, by means of which their valuable contents have been laid before the American public. Professor Mauthner's work is not a new book ; this third edition comes fully up to the development of medical science at the present day, as the first one did some years ago; it is widely known throughout Germany, and has been favorably received by the public. The untimely death of the author, shortly after his visit to this country, we have to mourn. The book is original throughout.

We cannot say as much of Dr. Bednar's little book. There is not one chapter in it which does not contain a vast amount of experience, and exhibit a fine talent for popular writing. But all this experience, talent and knowledge belongs, not to Bednar, but to Dr. L. F. E. Bergeret, whose work, entitled "*Maladies de l'enfance ; erreurs générales sur leurs causes et sur leur traitement. Instructions élémentaires, règles hygiéniques.* A Paris, 1855, pp. 323." Dr. Bednar has almost entirely translated, while hardly mentioning in his preface, Dr. B.'s name. Such is the case, especially in the chapters on worms and dentition. The author proves the slight importance of both these agencies in the diseases of the infantile organism, while the prejudice, in regard to them, of the public, and, we are sorry to say, of physicians, is great and universal.

Dr. Besser has, at last, after having made himself a good reputation, a few years ago, by a small pamphlet on the importance of the first days of infantile life for the education of infants, come before the public with a book, which cannot fail to place the author in the first rank among popular writers. His purpose is not only to give a number of remarks and prescriptions on physical and mental education of children, but to make parents understand why they are given. His expositions of generation, embryology, pregnancy and parturition, belong to the best we have ever seen published for the use of the public at large. This book is more deserving of being translated for the benefit of our country, than any with which we are acquainted.

Dr. Ganneau's book treats of the usual objects of a work of this character; such as food, air, temperature, light, exercise, bathing, dress, dentition, weaning, etc. Good though a part of the articles be, and although we do not desire to detract in the least from their value, it is impossible for us to agree with the author in all his premises. Among the opinions and doctrines which we could not approve, are the following: "Digestion is said to be more active during sleep, while physiology is teaching the contrary; the circulation of the blood to be more rapid, because of the greater number of pulsations, while it is well known, that the quickness of the pulse frequently is not in proportion to the rapidity of circulation. The infant ought to take the breast, according to our author, every hour, or at least every two hours during the first four or five days, 'as long as the milk fever lasts,' and weaning never ought to take place, in common cases, before 16 or 18 teeth are cut, at 22 or 24 months of age; and in no case to be allowed before the age of 13 or 14 months." We can no more subscribe to this than to Dr. G.'s assertion, that generally wherever cerebral symptoms and mania, occurring during the puerperal indurations of the breast, degenerating into cancer, sterility, leucorrhœa, etc., are the consequences of mothers not nursing their infants themselves, the author does not even undertake to show a physiological or pathological connection, as between cause and effect. Finally, sentences like the following do not read well in a medical work: "At the same time that physical and moral strength are being developed, the organs, too, develop themselves" (p. 73). The author does not appear to be entirely convinced of his own "convictions," because there is a striking contradiction between the following important sentences: "The moral education of the infant begins with its birth" (p. 41), and "the infant cannot have habits at this early age, its life being too active; every day new sensations are impressed upon its brain, and the preceding ones are forgotten" (p. 65). Nevertheless, there are some good views, especially in the chapter on moral education, which we sincerely wish every mother knew, and the perusal of which has given us a great deal of pleasure.

Dr. Parker's book has been written for the purpose of "giving to the mother just that information which she needs as a mother, and not that which will make her believe that she can do without the services of a physician when her child is sick;" and on the principle, that "a smattering of medical knowledge is an especially dangerous thing." According to the views laid before our readers in our introductory remarks, we can but agree with the plan followed in Dr. P.'s book, but we must express the opinion that there are directions in it which either allow, or require more, than we shall deem proper to allow or require.

We should not allow a pregnant woman to take, at her pleasure, the pills recommended on page 16, the less so, because we do not agree with our author in his opinion that the bowels, in pregnancy, ought to be moved every day, and that constipation brings with it many discomforts and annoyances; for it is well understood, that moderate constipation, during pregnancy, is as common as it is easily tolerated. Moreover, we do not think that the two or four grains of bi-carbonate of soda recommended would have any effect on the excessive acidity of the stomach. Further, we should not allow a mother to administer to her infant a compound mixture of chalk, tincture of kino and of cardamoms (p. 161), as we should not expect to find in her the capability of making a diagnosis between an ordinary slight cold, and a graver disease (p. 166), or between spasmodic or membranous croup (p. 170).

Opinions may differ on dietetical as well as on pathological subjects, and we may be allowed to state, that the use of the syrup of rhubarb (p. 151), seems to us at least unnecessary. We believe that constipation in infants, in the majority of cases, is due to the superabundance of casein in the milk; therefore, the administration of a small quantity of sugar when wanted, or every day, will generally effect a remarkable regularity of the bowels. For this reason the reader will perceive the necessity of being careful in the administration of sugar-water which Dr. P. recommends as a regular beverage during the summer months (p. 109). It is often apt to produce or increase diarrhœa, so common among our children during the heat of summer, the influence of which is certainly not so unexplained as Dr. P. considers it to be. There are other doctrines taught in this work, to which we should not assent, but we shall allude to only one, viz. cutting the gums. The operation itself needs no explanation. We will only state that the teeth are pressing the gum long before becoming visible, even before the birth of the infant. How is it, then, that all the formidable accidents, said to be consequent on dentition, are seen only when the teeth are beginning to penetrate the surface of the gum. Neither is the operation so innocent as Dr. P. believes it to be. If the gum be incised before the tooth is near the surface, we may expect a firm cicatrix to be formed, which will afterwards produce real difficulties. We have, indeed, seen good effects from incisions of the gum, but in only a very few cases, and we doubt if we shall have to make them "many hundred times" in all our lifetime. We desire again to direct the attention of our readers to Dr. Bergeret's book above quoted for interesting remarks upon this subject. While thus exposing what we believe to be some weak points in Dr. P.'s book, we have the sincere conviction, that it will have a vast number of readers among American mothers. Dr. P.'s elegant style of writing and earnestness cannot but gain a great many admirers. There are in his little work so many just remarks on the care of the infant before and after birth, on wet nurses, on artificial feeding, on weaning, on the management of the sickroom, etc., that the profession will render a service to every intelligent mother, to whom they may recommend a book dedicated to the welfare of her offspring.

II. SCIENTIFIC WORKS.

A practical treatise on the diseases of infancy and childhood. By T. H. Tanner, M.D., F.L.S., London, 1858, pp. 408.

An inclination to collect, destroys or lessens the tendency to produce. We may confidently assert that the greater the number of manuals issued the greater the dearth of new facts and real scientific discoveries; at all events, it is true, that a small monograph or a short, but original article in a medical journal, is to be valued higher than a large manual destitute of new facts and the most recent discoveries. We regret that it is our duty to notice a book, which does not at all meet the demands of the time in and for which it has been written. We the more regret it, because we have completely to disagree with a highly favorable report in the *Edinburgh Journal of Medicine* (Aug.), the reports and reviews of which we have always been accustomed to hold in great esteem. We feel, however, very willing to acknowledge everything that is praiseworthy, and therefore we heartily, with the *Edin. Journ.*, give Dr. T. credit for limiting excessive bloodletting in infantile diseases; but we deny him the originality in these views which the *Edin. Journ.* claims for Dr. T., and which Dr. T. claims for himself. The same remarks which the *Edin. Jour.* is at the pains of reprinting, may be found just as well expressed in any good manual on diseases of children, and much better, we think, in Dr. John B. Beck's *Essays on Infant Therapeutics* (New York, 1855, pp. 82–100).

A commendable feature of the work is the large number of subjects treated of, as but very few of the many manuals on diseases of children are complete. This deficiency is a great defect in a book designed to give full information on any subject that may occur in practice, and is not only found in our own American manuals, by Meigs, Dewees, and Bedford, but in those also by West, and even Rilliet and Barthez; this latter work should rather be considered a collection of most excellent monographs, than as a complete manual. While thus acknowledging the completeness of Dr. Tanner's book as regards the range of subjects considered, we have to confess that there is scarcely one article in the whole collection agreeing with the results of modern science in general, and of pædiatrics in particular. We shall cite only a few examples, from which our readers may draw their own conclusions. Atelectasis pulmonum (p. 308) has no other cause attributed to it by the author than bronchitis. In his opinion, pleurisy in children (p. 305) is most frequently produced by the extension of the inflammatory action in pneumonia, while it may be considered as certain, that the most obstinate and fatal cases of pleurisy very frequently are not even combined with pneumonia. Again our author asserts that laryngitis, pneumonia, and pleurisy are not unfrequent, while bronchitis and croup are perhaps, of all the severe affections of childhood, those which are most commonly met with, when in fact, every practitioner is accustomed to meet with many cases of bronchitis and pneumonia to a single case, except during a severe epidemic, of genuine croup. And it is well known that pleurisy and pneumonia do not rank equally as to the frequency of their occurrence. In the opinion of Dr. T. again, "Croup is most common perhaps during the second year of life," (p. 282), and where he is enumerating (p. 284) the indications and contra-indications of tracheotomy, he says: "The practice of auscultation in the second and third stages, yields information as to the amount of air entering the lungs, and the extension or not of the inflammation to the bronchial tubes and lungs." These assertions are by no means true, not even approximatively. The first one may readily be refuted by statistics which constantly prove, that (primary and secondary croup taken together) croup is less frequent in the first two years of life, than in the period from two to five years. Further, whoever has attentively observed the stages of croup, is well conversant with the fact, that in almost all cases it is more than difficult, even impossible, to learn the state of the lungs, because no pulmonary sound can be perceived on account of the overwhelming noise in the larynx. What, again, are we to say of the symptomatological accuracy of a writer, who calls (p. 223) "a continued contagious fever, accompanied by an eruption, and frequently attended with inflammation of the mucous membrane of the respiratory organs," *the* distinguishing character of measles? Or what of his nomenclature, when with him (p. 230), "simple or infantile, or remittent, or more correctly, typhoid fever" are synonyms? What estimate shall we place upon the scientific attainments of an author who, in a book written for the information of others, has only the following to say on typhus in children: "Typhus is, I *believe*, contagious?" or of his knowledge of pathology, who ventures to call infantile intermittent fever "a rare disease in children under five years of age?" or of his physiological learning, when amongst the four general effects of abstraction of blood from the system the first is said to be the diminution of the quantity of blood, and another, the weakening of the heart's action?

We must add, that we can but find fault with a sentence like the following (p. 304): "Either the inflammation terminates in resolution and complete recovery, or the roughened surfaces become adherent, or they are separated by the effusion of serum, and a kind of dropsy results, known as hydrothorax"—in which the terms are as badly selected as the pathology is incomplete or false. Moreover, we desire to state, that the general opinion expressed on diseases of childhood is not fully according to truth. For example, the author states (p. 20), that, "the maladies of this time of life are severe and insidious in their nature, soon give rise to organic change, and run their course with a rapidity not seen in the adult." This is true, but the contrary is equally true; that the maladies of childhood, severe and insidious though they appear to be, do not give rise to organic change, but yield readily to health and cheerfulness. Such is the action of the nervous system, and the rapidity of metamorphosis in the organism of children, that sometimes an extremely doubtful prognosis is refuted by an unexpectedly speedy recovery, and *vice versâ*. A practitioner yielding to the impression communicated by the above quotation from Dr. Tanner's work, would be liable to many mistakes in his estimation of the importance of apparently dangerous symptoms.

We have not space to extend our criticism, and will merely add that the author has, by no means, given to individual subjects the space and consideration which they deserve. We have spoken of atelectasis pulmonum, so prominent a feature in the investigations and studies of European writers, which is dispatched in a few lines. Tuberculosis occupies only two pages; scrofula only three and a half; syphilis only one and a half, while the symptomatology of this latter important disease is more defective and inaccurate than almost anything in the whole book. Finally, we have to state, that the extracts given above are taken at random; they are not a few points selected after a careful reading, but they were generally found on the first page wherever we happened to open the volume.

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2. *Therapeutisches Taschenbuch der Kinderkrankheiten nebst den gebräuchlichsten Heilformeln.* Für practische Artze and Studirende. Herausgegeben von Dr. Richard Hagen. Leipsic, 1857, pp. 320.

Therapeutical Vade-mecum of Diseases of Children, together with the Recipes most in use. Edited, for practitioners and students, by Dr. Richard Hagen. Leipsic, 1857, pp. 320.

Names of diseases brought forward in an alphabetical order; very meagre remarks on therapeutics at the head of every chapter; and a legion of short and long, cheap and dear, ridiculous and sensible, new and old-fashioned recipes following each other without system or common sense—such is the uniform matter printed on three hundred pages. No symptomatology, no pathology, no pathological anatomy: in short, nothing whatever of a scientific nature can be found in the whole volume. What such a book is good for, we can hardly perceive; an educated physician is not in need of it; its only use could be for the ignoramuses among "practitioners and students," and for individuals who desire to become children's doctors without thought or study. The whole volume is unworthy of the high development of medical science in Germany; we should not have noticed it, were it not the unfortunate duty of a literary reporter as well to proscribe what is unworthy, as to recommend what is deserving. Dr. Hagen's scientific reputation, after publishing a good translation of Barthez and Rilliet's renowned manual, would have remained better, if this little book had not brought his name on its first page.

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3. *De la Scrofule.—Leçons cliniques, professées à l'Hôpital de la Charité. Par M. Piorry, recueillies par* M. Frederic Duriau. Paris, 1857, pp. 14.

On Scrofula.—Clinical Lectures by Mr. Piorry, *at the hospital "de la Charité," collected by* Mr. Frederick Duriau. Paris, 1857, pp. 14.

Inflammatory action becomes manifest by the stopping of sanguineous or lymphatic circulation, by the coagulation of the liquid contained in the vessels, and, finally, by the exudation of a plastic lymph. After the inflammation has ceased, circulation may take place again by means of the vessels, but the plastic product exuded into the interstitial cellular tissue will not disappear in the same manner. It will undergo a process of condensation, and leave an induration of the ganglion, which by itself will, more or less, prevent lymphatic circulation and give rise to a new pathological affection somewhere else in the organism. Thus, such an induration must not be considered as the symptom of a specific diathesis. Now, these indurations are very slow in their development, and especially does suppuration take a very slow and tedious course. But this, although being a general fact with "scrofulous" individuals, is not a proof of the existence of a peculiar diathesis; for all such patients, suffering from the influences generally admitted to be the cause of "scrofula," as inappropriate food, bad air, etc., have a small heart, a small quantity of blood, and exhibit a slow circulation; and undoubtedly, according to Magendie, the circulation of the blood has a direct influence on lymphatic circulation. Therefore, in cases of this description, reaction and absorption are less powerful. "Scrofula," then, is but a defective development of organization, with the characters of anæmia or hydræmia, and consequently a disposition to indurations and swellings of the ganglia. Moreover, Lebert was unable to detect hereditariness of "scrofulous" symptoms in more than a third of his cases—an assertion which diminishes a great deal the necessity, or possibility, of assuming a diathetic peculiarity. Neither the general disposition, nor real local lesions must be classified as a specific disease. Even the chemical alterations of the blood, that have been found, are to be considered as a consequence of local lesions and the general quality of the blood, and not as a primary disease. Scrofula, then, is no more a specific disease according to Piorry than according to Velpeau.

Besides these highly scientific expositions, there are some remarks on asthma thymicum, a case of which is introduced by Mr. Piorry. It is the case of a young man affected with inflammation and ulceration of the tonsils, and consecutive swelling of the bronchial and cervical glands, pressing the pneumo-gastric nerve, and producing thereby attacks of suffocation. Mr. P. therefore coincides with Marshal de Calvi and A. Hourmann, contrary to the opinion of Mr. Lee, that a great many cases of thymic asthma, or spasmus glottidis, are but the consequence of pressure on the pneumo-gastric nerve.

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4. *Recherches sur les anomalies congénitales du canal de l'urèthre. Thèse par* Alexandre Adolphe Picardat. Paris, 1858, pp. 51.

Investigations on the Congenital Anomalies of the Canal of the Urethra. Inaugural dissertation by Alexander Adolphus Picardat. Paris, 1858, pp. 51.

This pamphlet treats, in different chapters, on complete or partial absence of the urethra, on its obliterations, on its abnormal openings (epispadias, hypospadias), on anomalies in its general form (dilatations and contractions), and on the twofold character of its canal. There is nothing original in this little work; but whoever wants to find a good collection of facts on congenital deformities of the urethra, from French authors, will feel satisfied with Mr. P.'s selection. We say from French authors, for, except Haller, Ruysch, Vesalius, and Borelli, whose Latin works are occasionally quoted, Mr. P. appears never to have consulted any foreign authority.

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5. *On the Nature and Treatment of Club-foot and analogous Distortions involving the Tibio-tarsal Articulation.* By Bernard E. Brodhurst. London, 1856, pp. 134.

Talipes-varus is by far the most common form of congenital distortion of the foot; of 765 cases of congenital talipes, 688 were varus, 43 valgus, 18 calcaneus. Equinus is an exceedingly rare congenital affection. Of non-congenital distortions, equinus, equino-varus, and valgus, are the most common. Double and single club-foot occur almost with equal frequency; of 688 cases, 363 were double, and 325 were single; and of these, 186 were of the right foot, and 139 of the left. There is in France 1 talipes in every 3,000 of the population; in England the number of cases is relatively larger. In cases of congenital distortions the author never finds the primary cause in the tarsal bones, but believes them to be turned, by muscular action, around their axis, there to be kept from their normal development, and to assume another shape. He positively denies any influence of the fœtal position in the uterus in producing distortions; but the iritation of the cerebro-spinal system, or its inflammation or degeneration, is a frequent cause. Sometimes an hereditary influence is probable. Non-congenital distortions develop themselves, in their majority, in early life, in consequence of paralysis, spasm, inflammation, voluntary position, and debility.

Paralysis is often seen in apparently healthy and robust children; the "myogenic paralysis" is mentioned by the author as a disease peculiar to the infantile age, no pathological alterations of the nervous centres being proved to exist. The author very seldom met with it before the ninth, or after the eighteenth month, and, like Bouchut, considers it to be of a rheumatic nature. Its attack is sudden, hyperæsthesia preceding in some cases. Sometimes only single muscles, sometimes entire groups of muscles are attacked.

Tenotomy is the most important remedy; the operation having been performed, the limb is brought into the same position as before, extension being commenced but in the second or third week. Early age is no contra-indication against tenotomy, which may be performed as early as the fourth or sixth week of life. In general, the author is of the opinion that very many distortions, particularly those resulting from paralysis, might be prevented by the early use of mechanical means. Pes equinus requires the division of the tendo Achillis; simple pes varus of the m. tibialis ant., either alone or with the plantar fascia; p. varus, if of a higher degree, of the mm. tibialis ant. and post., flex. long. digitor. and tendo Achillis; congenital valgus the division of the mm. peronæi. Calcaneus, according to the author, seldom requires the division of the flexor muscles, being mostly a consequence of paralysis of the extensors. The apparatus the author makes use of are Scarpa's and Langard's shoes, and a shoe modified by himself from Scarpa's. For paralysis he resorts to galvanism ; the internal administration of sulph. strychn. had only a momentary effect; sulph. zinc., in doses of from 3 to 5 grains a day, appeared to produce a somewhat better effect.

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6. *On the Mechanical Appliances necessary for the Treatment of Deformities.* By Henry Heather Bigg, Anatomical Mechanist. Part I. *The lower limbs.* London, 1858, pp. 236.

This volume is not strictly professional, but is the work of a practical mechanic. A description of 75 different instruments is given, together with the theory of their action, and the manner in which they should be applied and adjusted. The mechanical appliances described are for deformities of the toes, of the foot, and ankle (tal. valgus, equinus, varus, calcaneus), of the leg, knee, and hip (curved tibia, genu valgum, contracted knee, and contraction of the hip-joint). The author comes to the conclusion, that unless mechanical appliances are constructed with a due regard to the anatomical and mathematical conditions of malformations they will inevitably give dissatisfaction. This is a clear and intelligible, practicable book, and gives testimony of a fine mechanical talent, and good anatomical knowledge.

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7. *An effectual and simple Remedy for Scarlatina and Measles.* In a letter to John Simon, Esq., F.R.S., with an appendix of cases. By Charles Witt. London, George Philip & Son, 1858, pp. 24.

The object of this pamphlet is to recommend the bi-carbonate of ammonia, as *the* never failing remedy in scarlet fever and measles. Of the writers who have preceded him with specifics our author names Letsom (1722), Wilkinson, Peart, Ricardo, Strahl and Riecken. If he had known the names of some others, as Malin, Bodenius, Fischer, Loewenhardt, Schlesier, Rösch, von Ammon, Stöber, Gross, Heine, and Gyrsting, he would, perhaps, have omitted to carry owls to Athens. At all events, after it has been decided upon by scientific medicine, that there is no such thing as a monarchical power in a remedy, as little as there is an absolute essentiality in a series of symptoms called a disease, it appears to be unnecessary to repeat in a special pamphlet what has been asserted a hundred times before. If we go back in search of specifics, we shall find abundant materials for pamphlets in the long-forgotten, all-saving methods of blood-letting, antiphlogistic treatment, cold water, and chlorine, each of which has had its time. We think much of the bi-carbonate of ammonia in cases of scarlatina, requiring powerful stimulants, because of the dissolution of the blood, and general depression of the nervous functions ; but we cannot say with Mr. Witt, that we have been so fortunate as not to lose a patient out of several hundreds.

(To be continued.)

BIBLIOGRAPHICAL NOTICES.

ART. XII.—*Diseases of the Urinary Organs. A Compendium of their Diagnosis, Pathology and Treatment.* BY WM. W. MORLAND, M.D., etc. Philadelphia: Blanchard & Lea, 1858.

EVERY medical practitioner whose attention has been to any extent attracted towards the class of diseases to which this treatise relates, must have often and sorely experienced the want of some full, yet concise recent compendium to which he could refer. He must have keenly felt that there was much needed an able and accurate *résumé* of the present state of science in respect to diseases of the kidneys and bladder; one which should clearly point out the benefits that have accrued from the experience and researches of the profession throughout the world during the last few years, and which should bring our knowledge upon these subjects up to the present moment.

This desideratum has been supplied to the profession, by Dr. Morland, and it has been ably done. He has placed before us a full, judicious and reliable digest of the knowledge which has come down to us from the past, and of that which has recently been rapidly accumulating in regard to the diseases to which we have referred.

The book is a thick octavo, containing 579 pages, and is divided into two parts. The first part treats of the diagnosis, and the second of the pathology and treatment of urinary disorders. One chapter in each part is devoted to the affections of the supra-renal capsules, a class of diseases which have been but recently added to the catalogue, already sufficiently long, we had supposed, of the ills which flesh is heir to. While yet the functions which these bodies are created to perform in the human economy are hidden in obscurity, we are called upon to note their diseases, and the almost inevitable fatal issue to which these affections tend. The nearest approach to a sound physiological theory which has yet been broached, is that which has been hazarded by M. Brown Séquard, who considers these organs as intended to destroy a pigment, which, when they are diseased accumulates in the system, and is deposited upon the surface. This "Addisonian bronze" has thus far been observed in a considerable number of instances, on both sides of the Atlantic, and but five so-called exceptional cases have as yet been reported, in which, when this symptom had been observed, it was not found coincident with the capsular disease, and these do not perhaps fairly come under this head. Two were dissecting-room subjects, and we know nothing of their previous history, nor of the appearance of the skin during life, nor of the parallel and equally important phenomena by which it was accompanied. The discoloration of the skin, as observed after death, was in these instances certainly similar to that which Addison has so well described. The three apparently exceptional cases related by this writer, may, on account of the doubt which existed in regard to the character of the cuticular appearances, and other attendant circumstances, be justly thrown aside, until a more extended inquiry and investigation of undoubted cases, with enlarged experience, shall have placed the matter in its true light, and have either given to science a new pathological fact, or have caused the capsular theory to be abandoned, or have presented some more philosophical and correct explanation of the phenomena observed. The diseases of these organs, although, so far as is known, not immediately connected by function with urinary disorders, yet here receive that full consideration to which, on account of the present aspect, interest, and importance of the question, they are most certainly entitled.

The more common and better known diseases of the kidneys, ureters, bladder and urethra, their pathological history, diagnosis, and treatment, are distinctly recorded. Each subject is treated with sufficient minuteness, yet in a succinct, narrational style, such as to render the work one of great interest, and one which will prove in the highest degree useful to the general practitioner. To the members of the profession in the country it will be peculiarly valuable, on account of the characteristics which we have mentioned, and the one broad aim of practical utility which is kept in view, and which shines out upon every page, together with the skill which is evinced in the combination of this grand requisite with the utmost brevity which a just treatment of the subjects would admit.

The illustrations with which it is embellished indicative of the anatomical relations of the parts—the surgical manipulation to be employed—the representations of morbid structures and of microscopical appearances—all tend to render the work one which we gladly welcome as a valuable contribution to medical literature, and one which a Bostonian is justified in viewing with pride and satisfaction, as a product of native industry and talent. B. B.

Boston, October, 1858.

Art. XIII.—*Mind and Matter; or, Physiological Inquiries, in a series of Essays, intended to illustrate the mutual relations of the Physical Organization and the Mental Faculties.* By Sir Benjamin Brodie, Bart, D.C.L. With additional Notes by an American Editor. New York: Samuel S. & William Wood, 1858, pp. 279.

The author of this little volume has long stood preëminent in our profession, both as a physiologist and a practical surgeon. His labors in every department of medical science to which he has directed his attention, bear the impress of a truly philosophic mind. In no other of his numerous publications does this appear more strikingly than in the work before us. The subject—the relation of mind and matter—requires for its proper investigation a thorough knowledge of physiology, long and patient observation, careful analysis, and correct interpretation of phenomena, and finally, profound reflection. These essential qualities the author happily combined in the highest degree.

The field of study upon which Mr. Brodie has entered is not new or uncultivated, and he will find not a few earnest co-workers ready to combat or further his views. It is no part of our purpose to enter upon even an analysis of the work, and we shall content ourselves by simply calling the attention of our readers to it. The author has chosen the form of a dialogue as best adapted to his subject, as it is the easiest and most natural method of conducting an argument. The style of composition is chaste and elegant, and the presentation of facts clear and forcible.

ART. XIV.—*A System of Human Anatomy, general and special.* By ERASMUS WILSON, F.R.S. A New and improved American, from an enlarged London edition. Edited by WILLIAM H. GOBRECHT, M.D., Prof. of Anatomy in the Phila. College of Medicine, etc., etc., with three hundred and ninety-seven illustrations on wood. Philadelphia: Blanchard & Lea, 1858. pp. 616.

The present edition of this popular work is enlarged by the addition of fully one fourth more matter than the previous edition contained. We commend it cordially to students of anatomy.

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PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrical Science and Diseases of Women; prepared for the New York Journal of Medicine. By E. Noeggerath, M.D., Physician to the Female Department of the (Canal street) German Dispensary of the City of New York.

I. ANATOMY AND PHYSIOLOGY.

I. *Dr. Lambl, of Prague, on the nature and origin of spondylolistesis* (*Scanzoni's Beiträge z. Geb.* Bd. 3, 1858).—All the pelves presenting this very interesting deformity, pointed out for the first time by Prof. Kilian (see the New York Journal of Medicine of May, 1857, p. 389), have been subjected to another thorough anatomical examination by Dr. Lambl in order to find out a law explanatory of the nature and rise of spondylolistesis in comparing it with similar deformities on other sections of the spinal column.

1. The pelvis of Prague (described by Kiwisch, Seyfert, Kilian, Gurlt) is remarkable for the total absence of disease in the bony system, thus leading to the supposition that the remote origin of the malformation has to be sought for in the original development of the pelvis. The cause of the deviation is founded on the presence of an intercalary vertebra, which is a rudimental piece of bone, incuneated from behind into the sacro-lumbar juncture.

2. The pelvis of Munich (described by Breslau) is in many points similar to that above mentioned, especially in regard to the anatomical disposition of the lumbo-sacral juncture. It presents a hydrorhachitic opening in the spinal canal, and a supernumerary vertebral body with consecutive lordosis and partial synostosis of the dislocated vertebra with the os sacrum. These supernumerary vertebræ may be found at different places in the spinal column, thus effecting deviation in many directions.

3. A large female pelvis in Vienna (described by Rokitansky and mentioned by Kilian). The cartilaginous disk of the lumbo-sacral juncture has disappeared entirely; the articular surfaces are uneven, very hard and covered with warty excrescences. These osseous protuberances are owing to a new formation, and are the cause of the thorough anchylosis of both vertebræ; upon the anterior edge of the first sacral vertebra may be found osseous masses, supporting the upper vertebra, which are located symmetrically on both sides of the mesian line, thus preventing the vertebral column from sliding down any farther.

4. A small female pelvis in Vienna (described by Rokitansky, Spaeth). The most striking feature in this specimen is the compression of the first sacral vertebra and the reduction of its height anteriorly to 3‴, so that the lower margin of the last lumbar vertebra is situated just opposite the upper margin of the second sacral vertebra. Besides this, the pelvis presents hydro-rhachitis sacro-lumbalis, with consecutive elongation of arch of the fifth lumbar vertebra, parallel to the vertical position of the articular surfaces of the proc. obliq. inf., dislocation of the same vertebra in front, lordosis lumbalis and pyæmic destruction of the symphysis pubis after metro-phlebitis puerperalis.

5. The pelvis of Paterborn (described by Kilian). It is of a very symmetrical form, presenting a clean lordosis of the lumbar portion of the vertebral column, without any lateral inflexion. The bones look very much like those in osteomalacic basins. No intercalary vertebra is present. The fifth lumbar vertebra is elongated in its sagittal diameter, forming a semicircle with upper convexity. The arch of the fifth lumbar vertebra is of a hydro-rhachitic construction, and this is, no doubt, the primary point which caused the dislocation of the vertebral body and the lumbar lordosis.

After a minute description of these five specimens, Dr. Lambl mentions—1. Dr. Robert's observation (*Monatsschrift für Geb.*, 1855, Bd. 5, Sept. 2, p. 81); 2. The pelvis of Brussels, a description of which was obtained by Prof. Gluge. It belonged to a rhachitic woman, 42 years old, who was pregnant with her third child, the second one having been delivered with the forceps. The last time, death occurred suddenly during labor, from rupture of the womb. In a post-mortem examination, all the pelvic symphyses were found very movable, the bones of the pelvis were very thin, the lower lumbar vertebræ have an anterior flexion (lordosis) narrowing the entrance of the pelvis so much that the fourth vertebra takes the place of the promontory. The upper part of the os sacrum is an atrophic and spongy condition, no doubt resulting from a local caries in consequence of which the sacral bone shrunk, thus permitting the vertebral column to slide forward. Therefore, this pelvis (mentioned by Kilian) cannot be counted among the spondylolistetic pelves. Among the pelves with vertebral sliding may be counted—*a*, a pelvis in Paris in the cabinet anatomique de la maison d'accouchement; *b*, a preparation in the amphithéâtre des hôpitaux, in Paris; *c*, a preparation in the anatomical museum of Bonn.

4. In opposition to these formations there is a deformity from spondylistesis and caries, in consequence of which the vertebral bodies and their disks are destroyed, while at the same time an osteophyte begins to grow up, which tends in a great measure to repair in some degree the primary evil; a preparation of this kind may be seen at Montpellier; lastly, a curious destruction and deviation of the vertebral column is observed in some instances, viz., kyphosis of the lumbar vertebræ, with compensating lordosis of the pectoral vertebræ.

11.—*Prof. J. C. Dalton on the anatomy of the placenta* (*American Medical Monthly*, July, 1858). After entering briefly into the historical part of the utero-placental anatomy, the author proceeds to develop his views on the distribution of the uterine vessels, with regard to those of the placenta. In opposition to Dr. Robin's views, he holds that the blood-vessels of the uterus do really penetrate into the substance of the placenta, as supposed by the Hunters, Dr. Reid, and Prof. Goodsir, and that they constitute, with the tufts of the fœtal chorion, an equal part of its mass. The placenta is therefore a double organ, partly maternal and partly fœtal, and in order to arrive at a distinct understanding of the arrangement of its vessels, a description of the development of the chorion of the fœtus and of the decidual membrane of the uterus, is necessary. At first, the villi of the *chorion* are quite simple in form and homogeneous in structure. Afterwards they become ramified by the repeated budding of lateral off-shoots from every part, and the external surface of the chorion presents a velvety appearance. Under the microscope these tufts appear to terminate by rounded extremities, and the larger branches of the villosity are seen to contain numerous oval nuclei, imbedded in a nearly oval homogeneous stratum, while the smaller villosities appear simply granular in texture. The blood-vessels coming from the umbilical arteries ramify over the chorion and penetrate into the substance of the villosities. They enter the stem of each tuft, and following every division of its compound ramification, they reach at last its rounded extremities. Here they turn upon themselves in loops, to unite finally with the venous branches which empty into the umbilical vein. About the third month the chorion becomes partially smooth. This smoothness, which begins at a point opposite the situation of the fœtus, increases in extent, and becomes more and more complete, spreading and advancing over the adjacent portions of the chorion. At the opposite portion of the egg, the chorion is thickened and shaggy, and takes part in the formation of the placenta, while the umbilical arteries enter the villi, forming, at the placental portion of the chorion, a mass of ramified vascular loops.

The *decidua* is nothing more than the mucous membrane of the body of the uterus. It consists throughout of minute glandular tubules, ranged side by side. A few fine blood-vessels penetrate the mucous membrane from below, and encircle the superficial extremities of the tubules with a capillary network. A small quantity of spindle-shaped fibro-plastic fibres is scattered between the tubules. The egg, when descended into the cavity of the womb, is imbedded in this hypertrophied membrane, and becomes attached to it. The villosities of the chorion insinuate themselves either into the uterine tubules or between the folds of the decidual surface. In this way the egg becomes entangled with both decidua reflexa and vera throughout the whole surface. Soon afterwards the umbilical vessels penetrate everywhere into the villosities of the chorion. Each villosity of the chorion, then, as it lies imbedded in its uterine follicle, contains a vascular loop, through which the fœtal blood circulates. At a later stage the vascular growth, both of chorion and decidua, becomes concentrated at the situation of the subsequent placenta, while elsewhere, over the prominent portion of the egg, the chorion not only becomes bare of villosities, but the decidua reflexa also loses its activity of growth, and becomes expanded into a thin layer, nearly destitute of vessels.

The placenta, accordingly, is formed by the continued growth at one particular spot of the villi and follicles of the decidua. The uterine follicle enlarges with the villus, which has penetrated into it, sending out branching diverticula. Besides the follicles of the uterine mucous membrane, also the capillary blood-vessels, which lie between them, become unusually developed. At this time, therefore, each vascular loop of the fœtal chorion is covered first with a layer forming the wall of the villus, which is in contact with the lining membrane of the uterine follicle; and outside of this again are the capillary vessels of the uterine mucous membrane, so that two distinct membranes intervene between both the fœtal and the maternal capillaries. As the formation of the placenta advances, the general anatomical arrangement of the fœtal vessels remains the same. But the maternal capillaries become considerably altered; they enlarge excessively and fuse successively with each other, thus becoming dilated into wide sinuses. At this period the development of the blood-vessels, both in the fœtal and maternal portions of the placenta, becomes so extensive, that all the other tissues, which originally coexisted with them, fall into a retrograde condition and disappear almost altogether. The villosities of the chorion are now hardly anything more than ramified vascular loops, while the uterine follicles have become mere vascular sinuses, into which the tufted fœtal blood-vessels project. Finally, the walls of the fœtal blood-vessels having come into close contact with those of the maternal sinuses, become adherent to them, and fuse with their substance, so that the two can no longer be separated without lacerating either the one or the other. The placenta, at this stage, is composed essentially of nothing but blood-vessels of the fœtus adherent to the blood-vessels of the mother; the blood of the fœtus is always separated from the blood of the mother, which has resulted from the fusion of four different membranes, viz.: the membrane of the fœtal villus; that of the uterine follicle; the wall of the fœtal blood-vessels; the wall of the uterine sinus. If a villus, from the fœtal portion of the placenta, be examined, it will be seen that its blood-vessels are covered with a layer of homogeneous or finely granular material, $\frac{1}{3500}$ of an inch in thickness, in which are imbedded small oval-shaped nuclei. This layer is all that intervenes between the fœtal blood in the tufts of the chorion, and the maternal blood in the placenta sinuses. The anatomical disposition of the placental sinuses is very difficult of examination in the detached placenta, because they are collapsed and apparently obliterated, and the fœtal tufts appear to constitute the whole of the placental mass; still they may be satisfactorily demonstrated in the following manner. The uterus of a woman who has died undelivered, near the full term, is opened so as not to wound the placenta; then, after the fœtus is removed, it is placed under water, with its internal surface uppermost. Then, the amnion has to be removed from the placenta. If the end of a blowpipe be now introduced into one of the divided vessels of the muscular walls of the uterus, and air forced in, we can easily inflate, first the venous sinuses of the uterus itself, and next the deeper portions of the placenta. If the chorion be now divided at any point by an incision, passing merely through its thickness, the air which was confined in the placental sinuses will escape and rise in bubbles to the surface of the water. Such an experiment shows conclusively that the placental sinuses communicate freely with the uterine vessels, occupy the entire thickness of the placenta, and are equally extensive with the tuft of the fœtal chorion. This experiment has been performed by Dr. Dalton on four different occasions. This method has many advantages over that adopted by the Hunters and Prof. Weber, especially because it is infinitely less liable to mislead by producing extravasations.

The opinion of some authorities, that no vascular openings are to be seen on the surface of the detached placenta corresponding with the mouths of the lacerated uterine sinuses, is explained by the fact that these vessels penetrate in such an extremely oblique direction, that their orifices may easily be overlooked.

III. *Dr. F. Guyon.—Etudes sur les cavités de l'utérus à l'état de vacuité* (Thèse. Paris, mars 1858.)—Dr. Guyon applied a stiffening substance for injecting the uterus, in order to find out the shape and dimensions of its cavity at the different stages of life. The results obtained in this way may be comprised as follows :

1. *From birth to the time of puberty.* The axes of the arbor vitæ are greatly developed, especially towards the upper extremity of the neck, so as to form an isthmus almost obliterating the cavity, from whence they diminish rapidly in size, ramifying towards the cavity of the body. A cavity of the womb does not exist, properly speaking, because the elevations of its internal surface touch each other entirely. The shape of the cavity is such, that it shows at its lower end a larger size, while from this point it contracts gradually up to the fundus, where the intertubular diameter is smaller than that of the entrance. The cavity of the body measures a little less than one-fourth of the entire length of the organ.

2. *Virgin and nulliparous uterus.*—The cavity of the body appears to be divided in two sections, one starting from the neck, narrow and long, the other intertubular, formed by two trigons connected at their basis. The three sides of the cavity are convex ; the lateral ones at first very obliquely directed, suddenly change their direction, approaching a vertical line on the summit of this second portion of the body.

The cavity of the neck is only a few millimetres larger than it was immediately after birth ; it is enlarged somewhat in the middle, restricted at the entrance, and not changed at its upper extremity. The shape of the mouth is generally that of a transverse slit, and not circular. The lateral columns present the same elevation as in the fœtus, in consequence of which the internal orifice is closed up by the natural rigidity of the uterine tissue. The folds representing the branches of the arbor vitæ are arranged in such a way that their free edge looks towards the orifice, so that they may arrest in some instances the entrance of a probe. In virgins, the length of the cavity of the neck exceeds that of the body, notwithstanding the latter one has considerably increased. In women who are used to sexual intercourse, the difference of both cavities is null, or a trifling increase of the cavity of the body.

The isthmus represents a cylinder of 5 or 6^{mm} in length, measuring 4^{mm} in its transverse, and 3^{mm} in its antero-posterior diameter. The total capacity of the cavities is from 3 to $5\square^{cm}$.

3. *Multiparous uterus*.—Cavity of the body perfectly triangular, inclosed within convex lines, but less so than in the virgin uterus, so that the uterine horns are enlarged at the expense of the intermediate cavity. The vertical as well as the lateral diameters are increased, while the cavity of the neck is larger but shortened, owing to the contraction of the vaginal portion.

The internal orifice (isthmus) is wider and shortened, but always closed by the projections of the walls, and the arbor vitæ continues to be perceptible. The capacity of the cavities is from 5 to $6\square^{cm}$.

4. *Uterus at the change of life.*—The internal orifice is generally obliterated. The cavity of the body, more or less distended by a transparent mucus, has generally retained its shape, and has gained a few millimetres in height. The neck has decreased in length so much so that, as a general rule, the vaginal portion has disappeared. After the external orifice is closed up in old women, the cavity of the womb exceeds in length that of the neck from 10 to 12^{mm}; in multiparous females, 0.004^{mm}; in nulliparous women, who have had sexual intercourse, both cavities are almost equal in length; in virgins, the cavity of the neck is 0.003^{mm} longer than that of the body, and 0.006^{mm} in the fœtus. From these researches, the author concludes that the uterine constrictions are always seated in the isthmus, and that they may result from a flexion, and more especially from retroflexions with rotation. The penetration into the peritoneum of intra-uterine injections, though manageable after death, is prevented in the living female by contractions of the womb.

II.—PREGNANCY, LABOR, AND PUERPERAL STATE.

1. *Dr. F. H. Birnbaum.*—*A review of my experience in regard to Intra-uterine injections for producing premature confinement.* (*Deutsche Klinik*, May, No. 18 and 19).—The author used this method in seven instances, partially combined with other methods, partially alone. Not one operation was followed by evil consequences. Of seven children, five were born alive; of which number, one died soon afterwards, two died during the operation of turning and extraction. No death occurred which might have been attributed to the method. The time between the injection and the beginning of the first labor pains was respectively one half hour, 2, 5, 17, 72 hours, and the time of actual labor respectively 1, 3, 6, 10, 6, 10 hours. Therefore, the effect of this method is sure and prompt, and demands only in very rare instances a combination. The most efficacious combination is the introduction of a

bougie into the womb, as the bougie is very apt to strengthen and support the irritating effect from the injections.

2. *C. Braun on the pathogenesis of hydrorrhœa gravidarum* (*Wien. Ztschr. N. F.* I. 17, 1858.)—The hydrorrhœa is a periodical discharge of a yellowish, sero-albuminous fluid from the genitals of pregnant women, which is unconnected with the rupture of the membranes, or the discharge of the amniotic liquor. Hydrorrhœa seldom occurs before the third month, but generally at a more advanced stage. It may appear only once, or more often, sometimes imitating the menstrual types, ceases generally after delivery, or continues in a few instances for a length of time during the puerperal state. In consequence of the red color of the fluid, the hydrorrhœa has been often mistaken for a menstrual discharge of blood.

Dr. Braun believes that the hydrorrhœal fluid is a secretion or rather albuminous exudation of the inner surface of the womb, which appears in an intermittent typhus, elevating a portion of the chorion from the decidua, or the latter itself, thus forming a reservoir for the fluid, from which it escapes occasionally through the mouth of the uterus. Similar albuminous discharges have been observed in the non-pregnant state, especially when fibrous tumors were in the cavity of the womb. Another proof that Dr. Braun's views are perfectly right, is the fact that after delivery the fœtal membranes are found intact, and that the quantity of liquor amnii is not lessened in cases of hydrorrhœa. The microscopical examination of a placenta expelled after hydrorrhœa, detected a recently formed membrane of cellular tissue on its convex surface.

3. *Dr. T. W. Hall on stomatitis materna* (*Cincinnati Lancet and Observer*, April).—Ulcerative inflammation of the mouth appears not unfrequently in women during the closing months of utero-gestation. It is rarely met with in particular localities, while in others it seems to be endemic. The affection seems to be of an aphthous nature, and associated with a disordered system, as that of anæmia combined with a scrofulous diathesis, dyspepsia, etc. It attacks the mucous membrane indifferently, and is even migratory in its character. It sometimes becomes chronic. The treatment consisted of astringents, acids and tonic medicines.

4. *Dr. W. Read on the influence of the placenta upon the development of the uterus during pregnancy* (*The American Journal of Medical Sciences*, April, 1858).—This very interesting paper was read before the Boston Society for Medical Improvement, and is intended to clear up some dark points of the theory of the development of the uterus in cases of placenta prævia. The question as yet unsettled is, whether irrespective of the position of the placenta upon the uterine walls, the fundus always begins to expand before any other portion of the uterus. The arguments brought forward in its favor by Doherti, Jacquemier, Murphy, Cazeaux, Ingleby, Ramsbotham, Lee, Blundell, J. Churchill, Meigs, Moreau, and many others, are reported and duly criticised. Besides the weakness of the evidence upon which these authors founded their theory, it cannot account for all the phenomena which occur in

placenta prævia. Why do some females who have the placenta attached to the proper neck of the uterus go their full term, while the majority of those who are in the like situation do not go so long? To give a satisfactory and sufficient explanation of these hitherto unexplained phenomena, Dr. Read proposes the following theory: the attachment of the placenta to any portion of the uterus causes a development at that place, which proceeds, *pari passu*, till the limits of growth in the placenta having been reached, the enlargement is continued and kept up by the pressure constantly exerted on the uterine walls by the growing contents till the time of parturition. In this way, the fact that very often, in complete insertion of the placenta, hemorrhage does not occur until the full term has been reached finds a sufficient explanation. For by the time that the placenta having passed the period of its most rapid growth, the fœtal mass has already begun to exert its effect upon the uterine walls to enlarge them; the added strength which the thick, firm disc of the placenta gives to the cervical portion to resist this distension, is enough to prevent its being felt in that direction. It applies also to partial presentations of the placenta of every degree, from that in which the os is almost entirely covered to that in which the edge only of the placenta is at its margin, the latter instance having a marked tendency to early bleeding. For just in proportion to the amount of the neck of the uterus covered by the placenta is it protected from the distending process to which it is exposed during the latter periods of pregnancy, and in just such proportion will the hemorrhage appear late or early. Those cases, also, where the placenta is on the cervix, in the immediate vicinity of the os, but at the same time not overlapping it, instances which do not manifest a hemorrhagic tendency, as was to be expected, are perfectly accounted for by the same reasoning.

5. *Dr. G. W. Thornton on extraction of a living child by turning after the death of the mother* (*Cincinnati Lancet and Observer*, Feb. 1858; *The American Journal of Medical Sciences*, April, 1858).—The mother died suddenly while in labor from some unascertained cause. Forty minutes elapsed after the last expiration of the mother before Dr. Thornton arrived. On examination he found that the membranes had been ruptured, that the head was in the cavity of the pelvis, the vertex presenting at the inferior strait. Dr. T. raised the fœtal head, passed the hand into the flaccid womb, turned the child, and extracted it as far as the head without delay; at this point it momentarily hung until assisted by the fingers in its mouth. Thus forty-five minutes elapsed from the last expiration of the mother to the complete extraction of the child. The child did not breathe and was of a bluish color; but a slight ticking could be heard on placing the ear over the heart. The fauces were cleared, Marshall Hall's ready method then diligently practised for half an hour, when a convulsive inspiration took place. This method was persevered in, assisted by aspersions and frictions, and at length respiration was established. The child, a boy of the average size, sucked vigorously at the bottle and lived for three weeks and two days; its death probably resulting from want of sufficient care.

7. *Dr. G. McC. Miller, of Brandywine village, Del., on the local*

application of belladonna as a means of arresting the secretion of milk (*The American Journal of Medical Sciences*, July, 1858).—A case is reported of a colored woman who was delivered of a dead child. About a day after her delivery Dr. Miller applied a solution of extract belladonna, gr. x. in aq. ℥ss., with a camel's-hair pencil to the areola of each mamma three times a day. The breasts swelled some on the third day and a little milk oozed from the nipples. But the secretion soon disappeared, and in less than a week the solution was discontinued, the mamma having reacquired their normal size.

6. *Dr. Alex. Ramsey on a large fibrous tumor of uterus: enucleation and expulsion—Recovery* (*Edinb. Med. Journal*, July, 1858).—A primipara was delivered, in a natural labor, of a healthy child, when Dr. Ramsey, in the act of removing the placenta, detected a large intermural tumor. An exploring needle was introduced for diagnosis, but no fluid escaped. The opening of the trocar, after some days, was found considerably expanded so as to admit the point of the forefinger, by which the opening was gradually enlarged, and separation was effected fully 3½″ around it in all directions, except that a thick and strong fibrous band extended from the lower and back part of the tumor to the anterior lip of the os uteri. This band was afterwards divided by the urethrotome. Five days afterwards the tumor came away on its own account; it was a large flaccid mass, about 2½ lbs., with a strong white investing membrane on all its surface, except where its attachments had been separated by direct interference.

(*To be continued.*)

To Readers.—The length of the original and review department of the present number has compelled us to omit several articles, reviews of books, etc., notwithstanding the addition of sixteen extra pages. This explanation is due those who may have anticipated the appearance of papers in this issue.

In closing this volume, we cannot forbear expressing our obligations to those co-laborers who, during the past year, have so generously sustained by their contributions the literary character of this journal. During that period it has been entirely made up from manuscript, carefully prepared.

We feel especially called upon to notice, in the most complimentary manner, the contributions of Drs. Jacobi and Noeggerath to the Retrospect department. Having facilities for consulting every medical periodical published, both in this country and Europe, they have furnished a more complete digest of the current literature of their respective subjects than appears in any other medical publication extant.

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ERRATA IN NO. I. VOL. V.

At page 78, line 8th from top, for “may,” read “many.”
“ 79, “ 27th from top, for “even,” read “ever.”
“ 79, “ 37th, for “nervology,” read “neurology.”
“ 80, “ 28th, for “is,” read “are.”
“ 81, “ 19th, for “commodation,” read “correlation.”
“ 81, “ 43d, for “conjunctional,” read “conjunctival.”
“ 82, “ 32d, for “all,” read “and.”
“ 83, “ 16th, for “and,” read “all.”
“ 88, “ 5th, for “nervously,” read “variously.”
“ 88, “ 8th, for “these,” read “their.”
“ 88, “ 24th, for “invite,” read “unite.”
“ 89, “ 2d, for “even,” read “ever.”
“ 89, “ 5th, for “all,” read “an.”
“ 89, “ 6th, for “all,” read “an.”
“ 89, “ 22d, for “causes,” read “laws.”
“ 90, “ 3d, for “through,” read “though.”
“ 90, “ 11th, for “our,” read “an.”
“ 90, “ 33d, for “experienced,” read “explained.”
“ 97, near bottom, for “them,” read “it.”
“ 98, “ 20th from bottom, for “commutation,” read “accumulation.”
“ 99, read “wittingly” and “unwittingly.”
“ 100, “ 5th, “definitive” should be “defective.”
“ 100, “ 13th, for “their class,” read “the class.”
“ 101, “ for “against the” man of straw, etc., read “to this.”
“ 102, “ 12th, “termonology.”

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